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PATENT & TRADEMARK

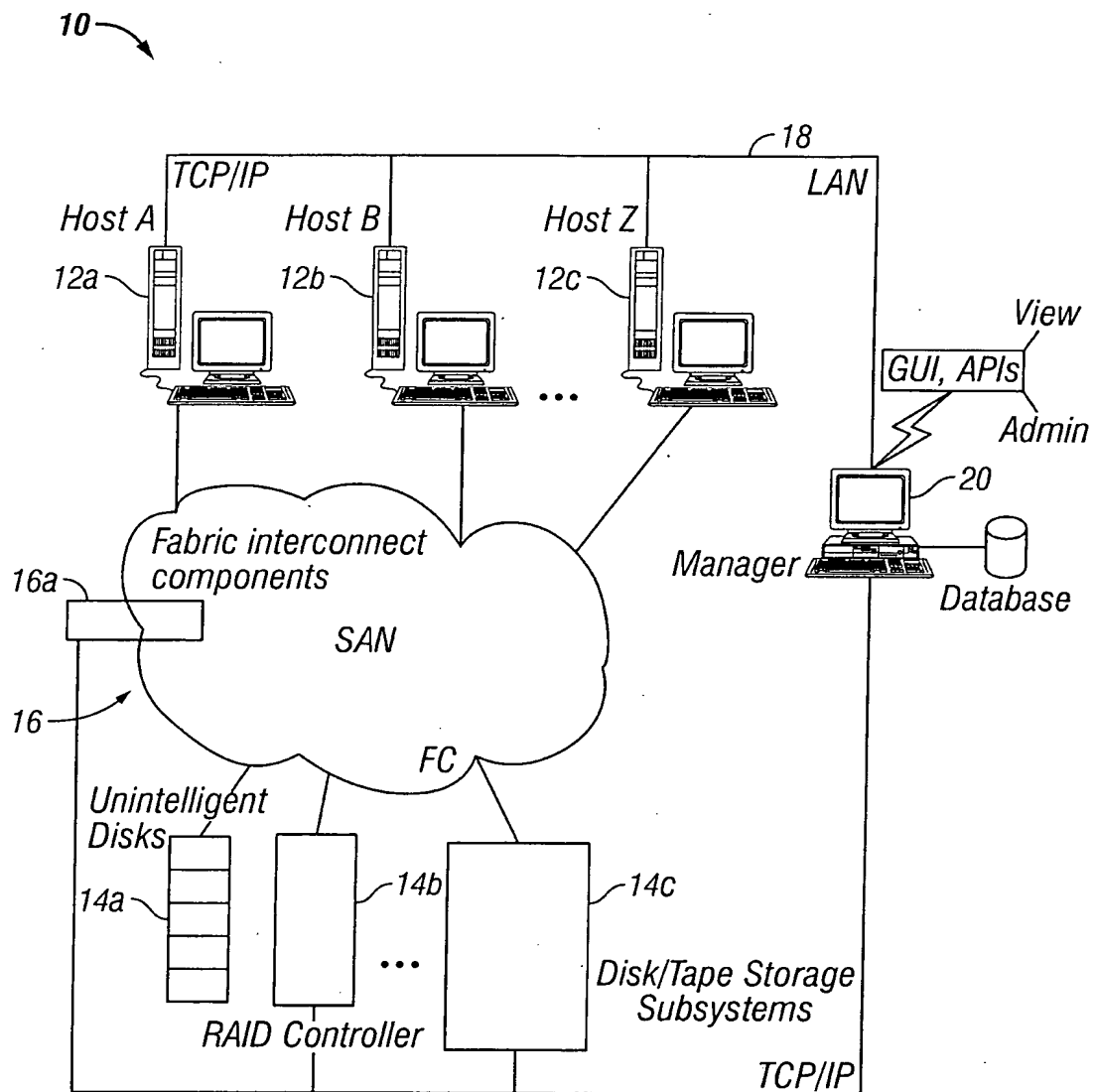


FIG. 1

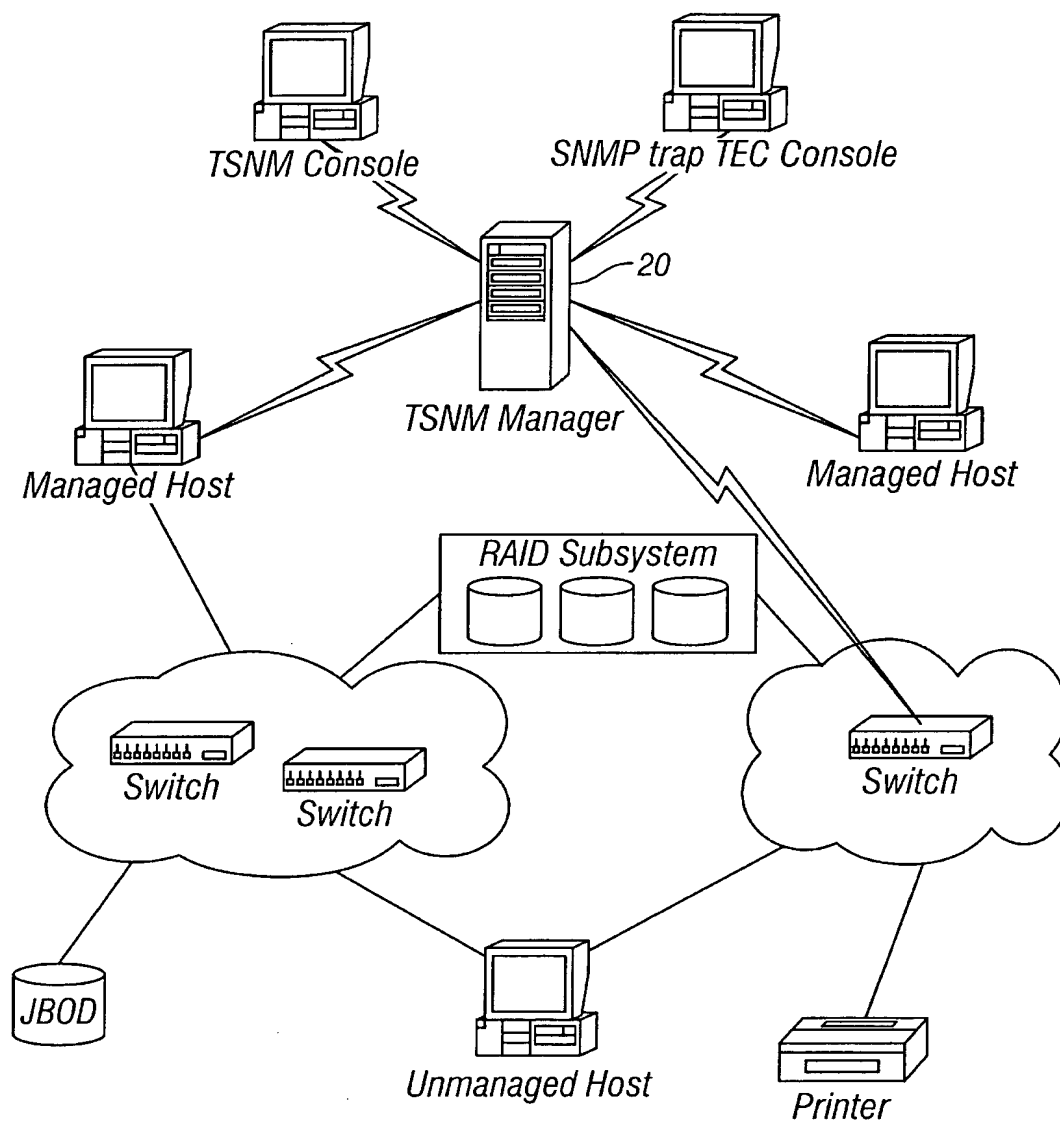


FIG. 2

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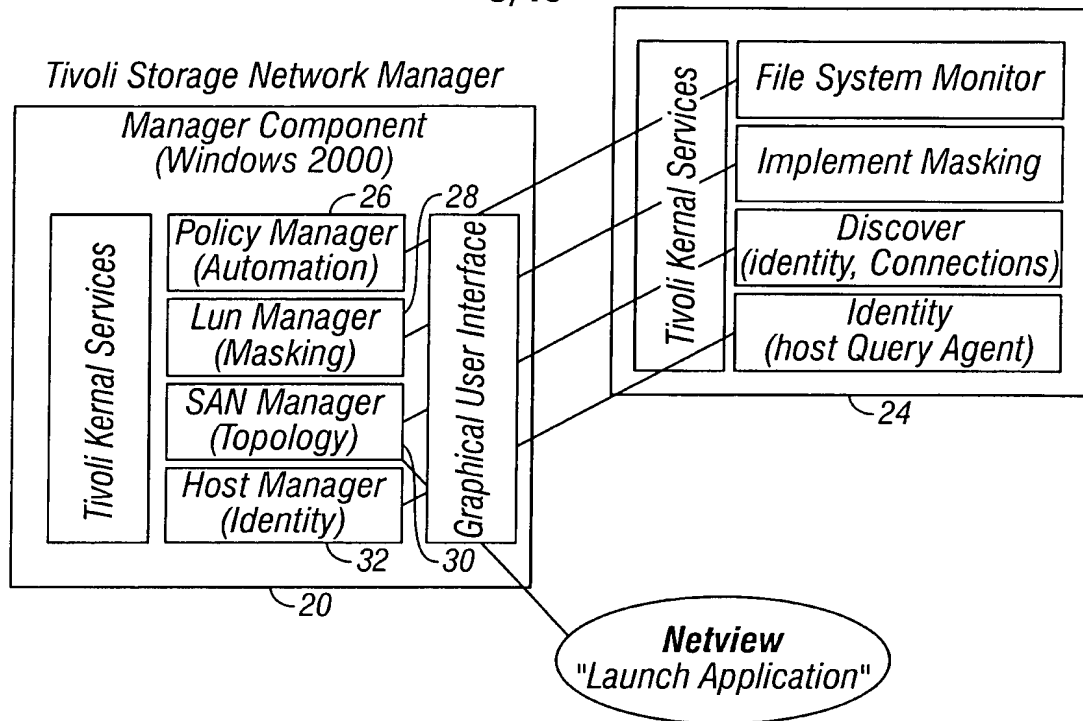


FIG. 3

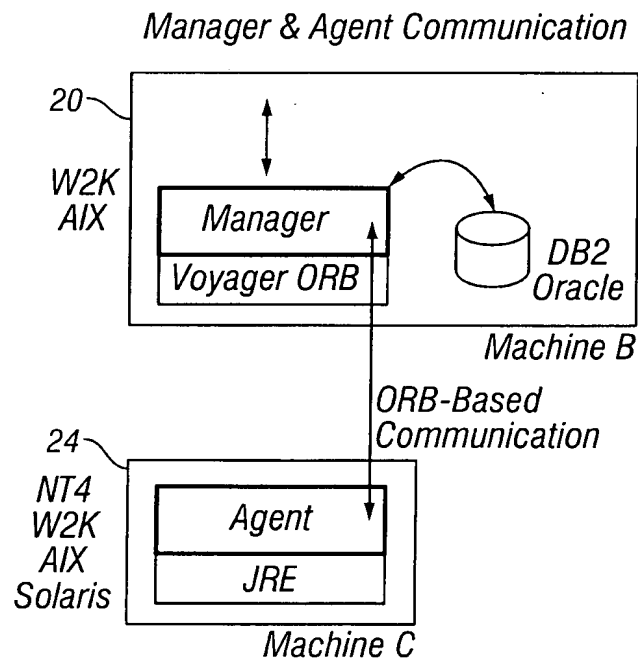


FIG. 4

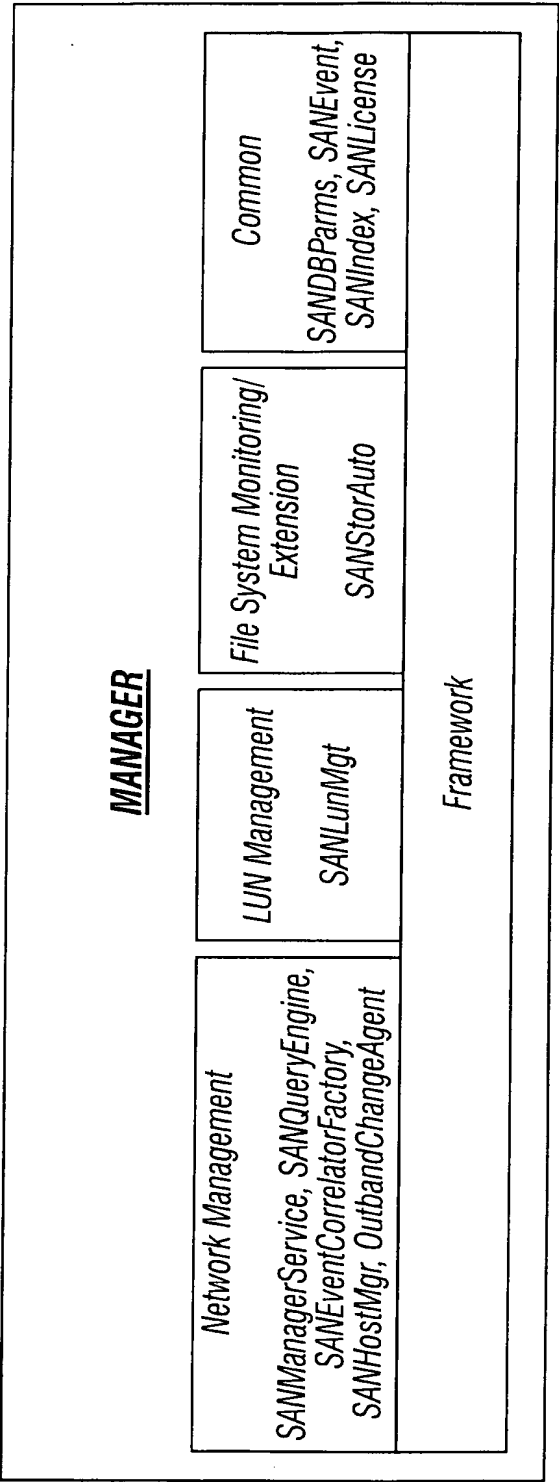


FIG. 5

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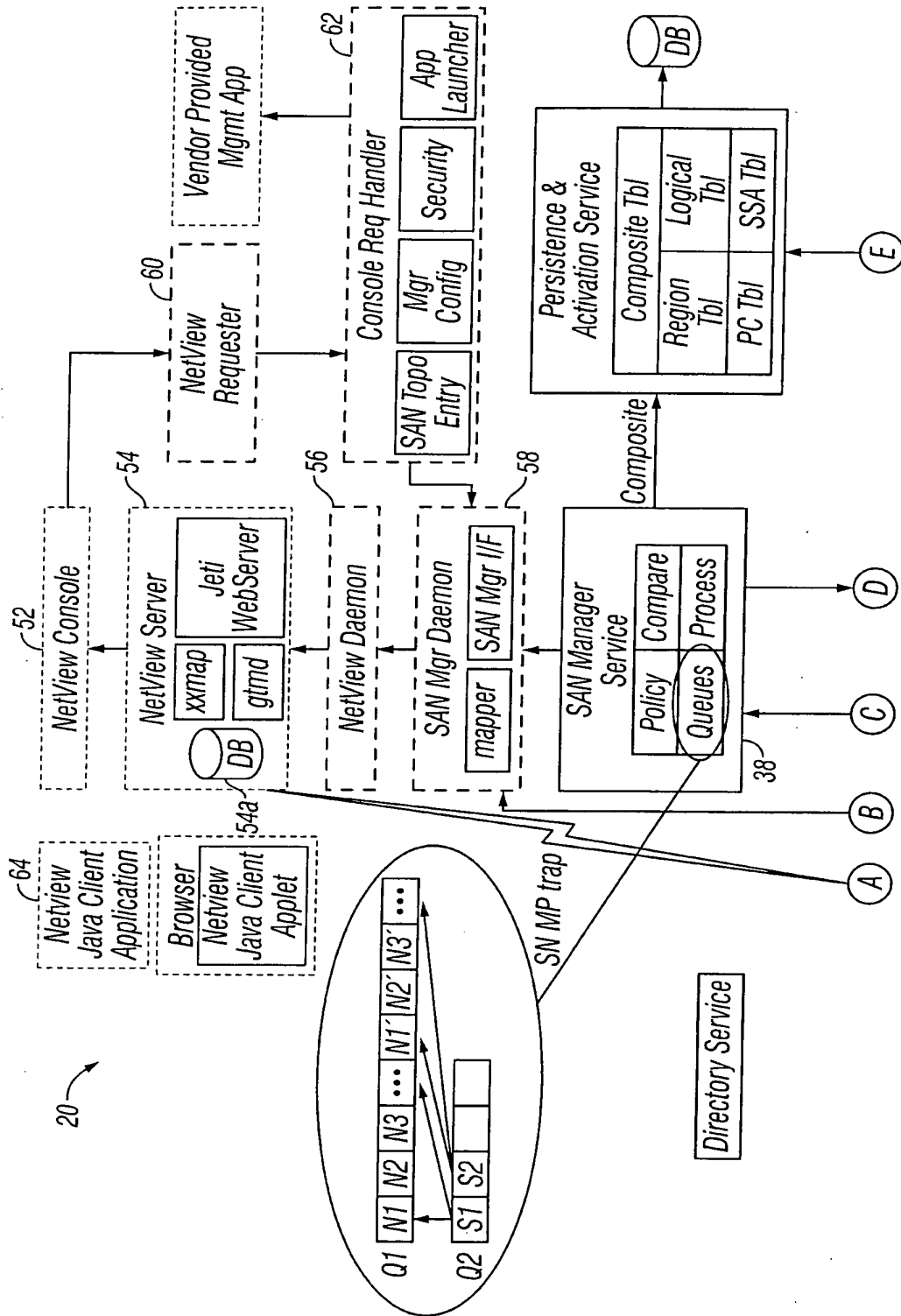


FIG. 6A

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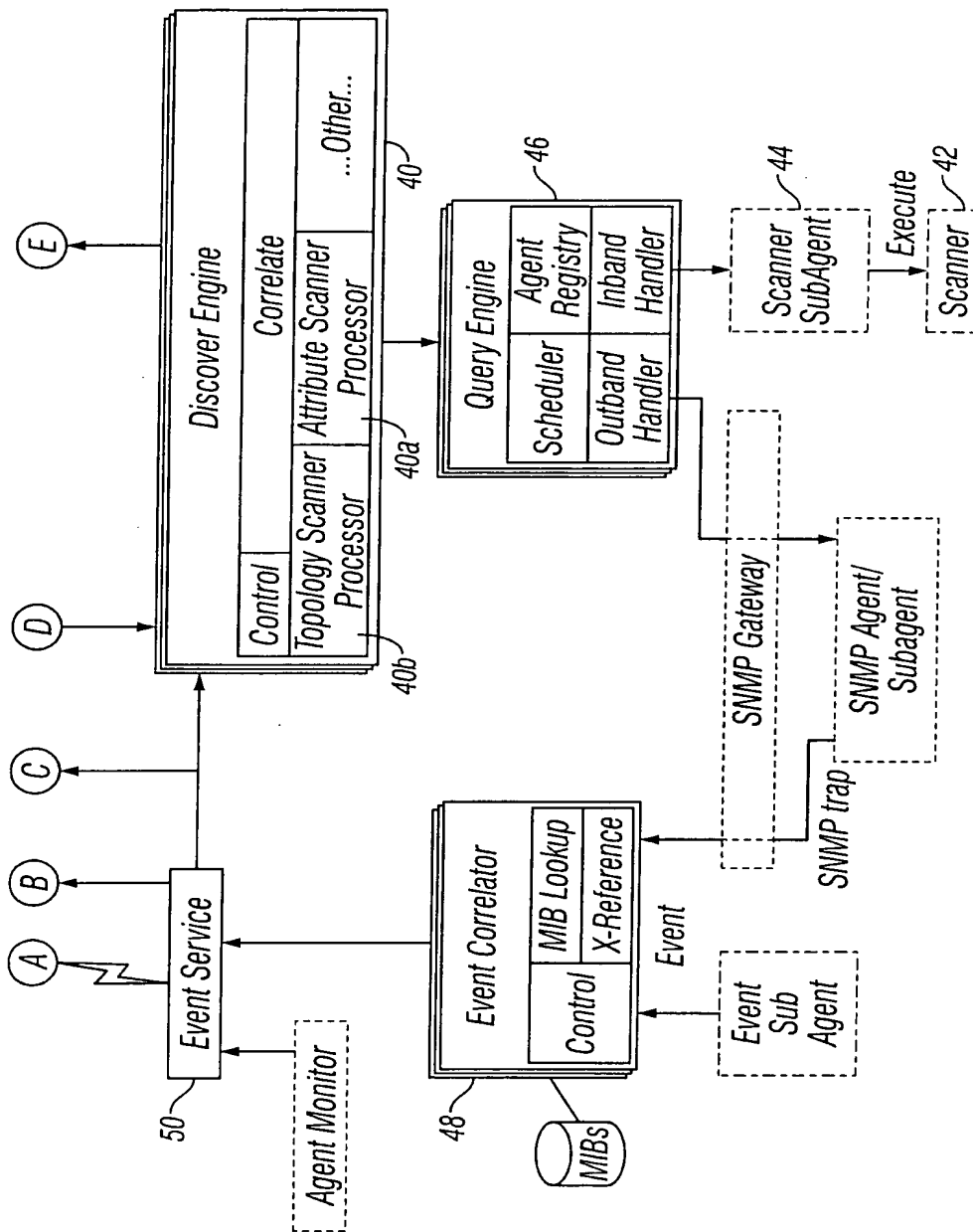


FIG. 6B

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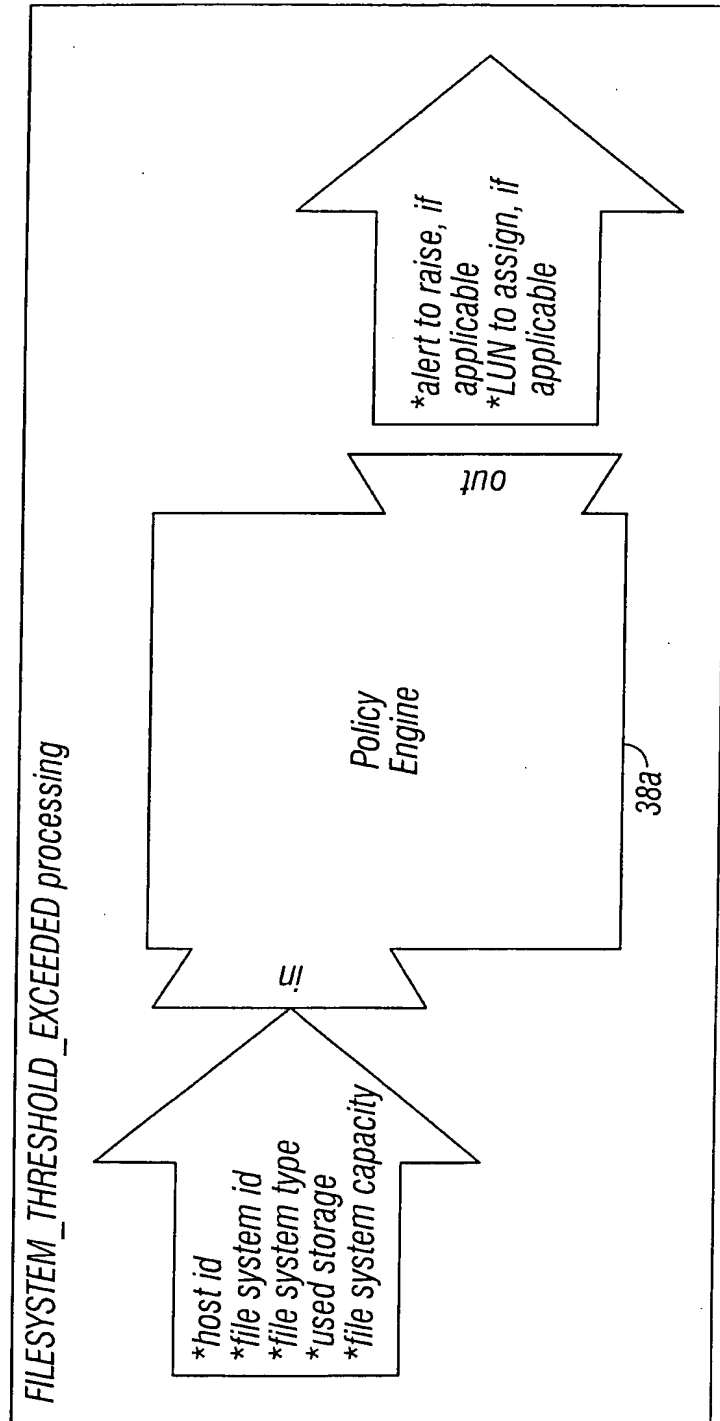


FIG. 7A

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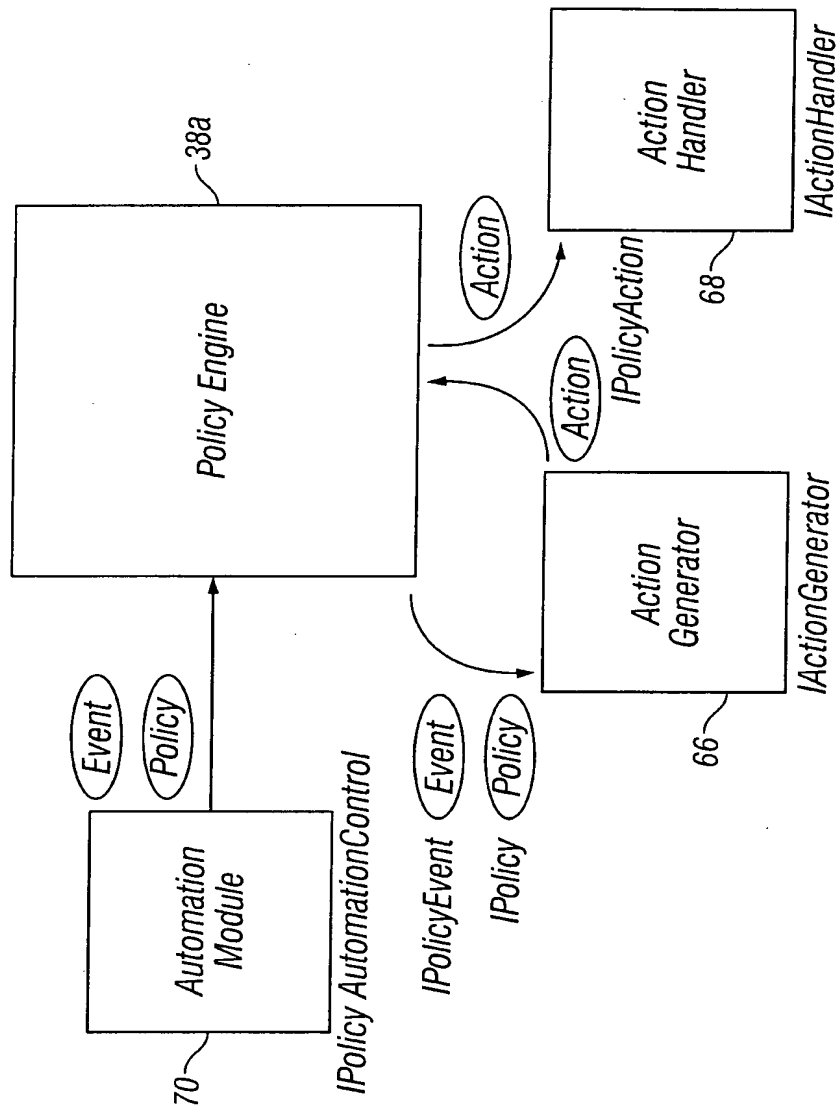


FIG. 7B



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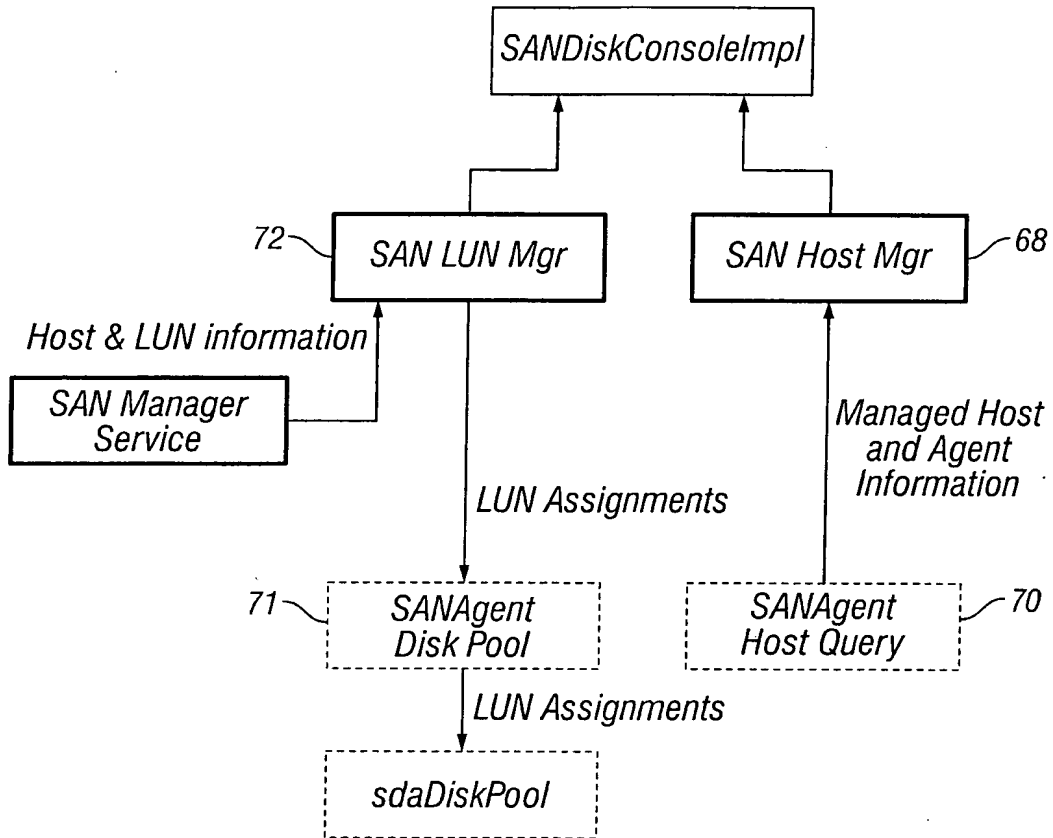


FIG. 8

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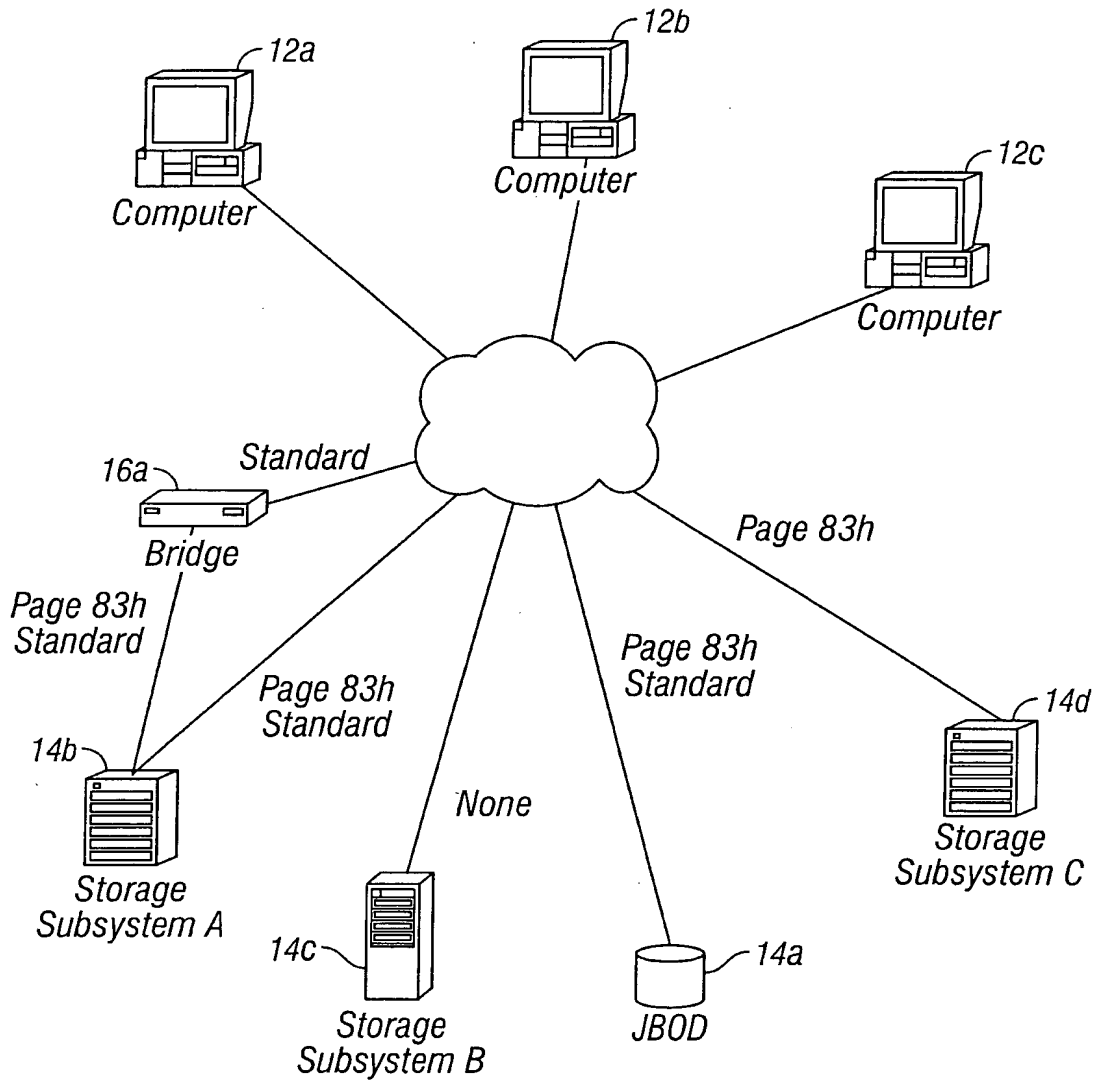


FIG. 9

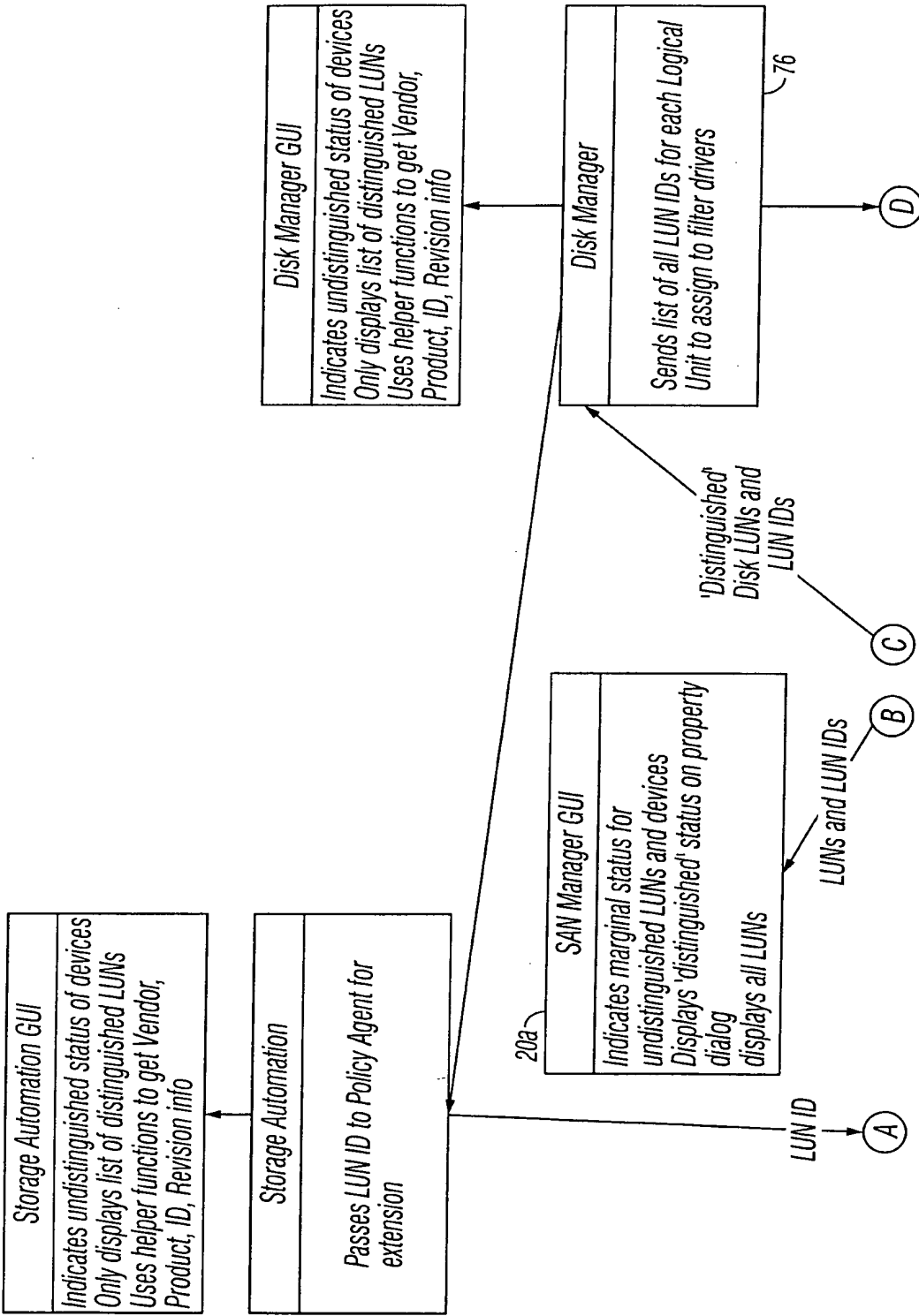


FIG. 10A

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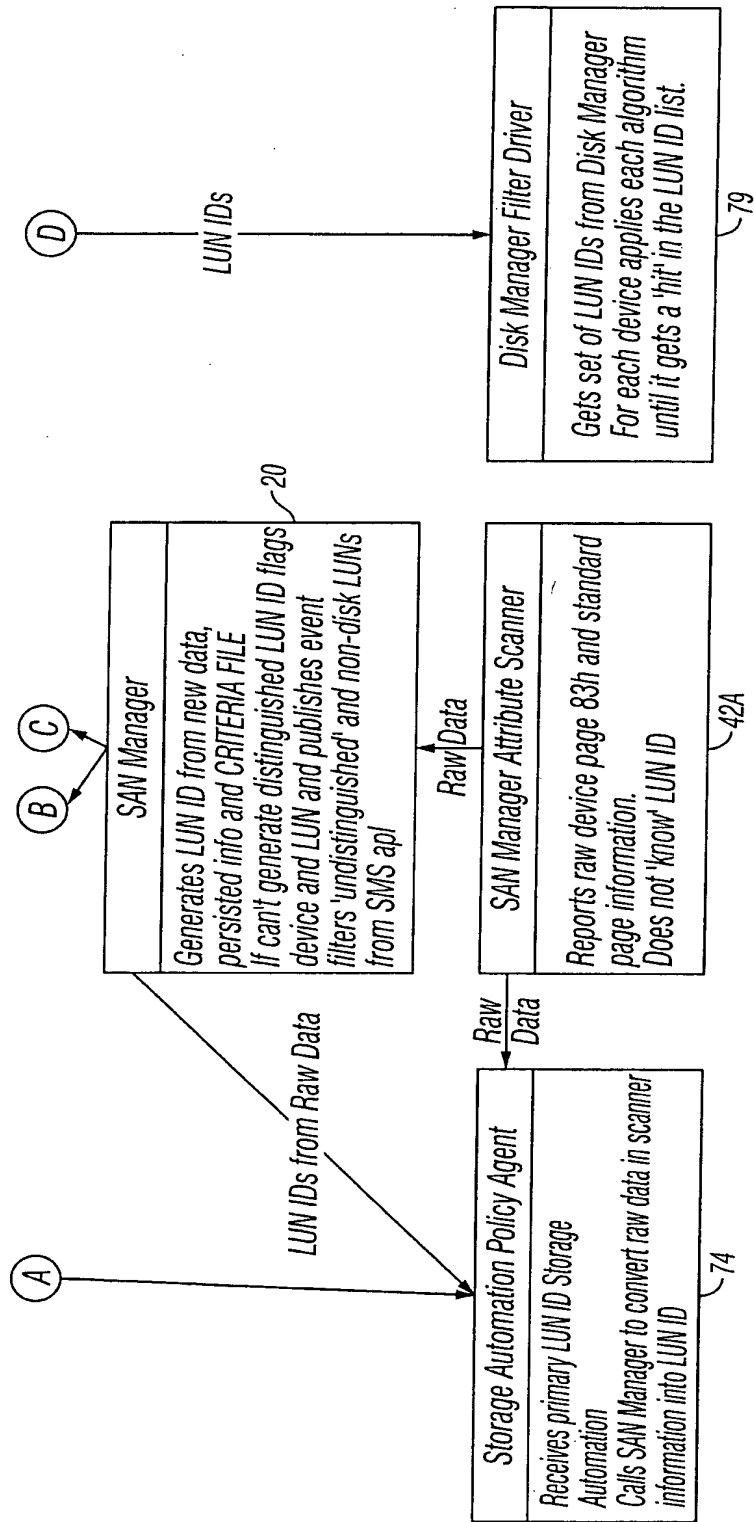


FIG. 10B

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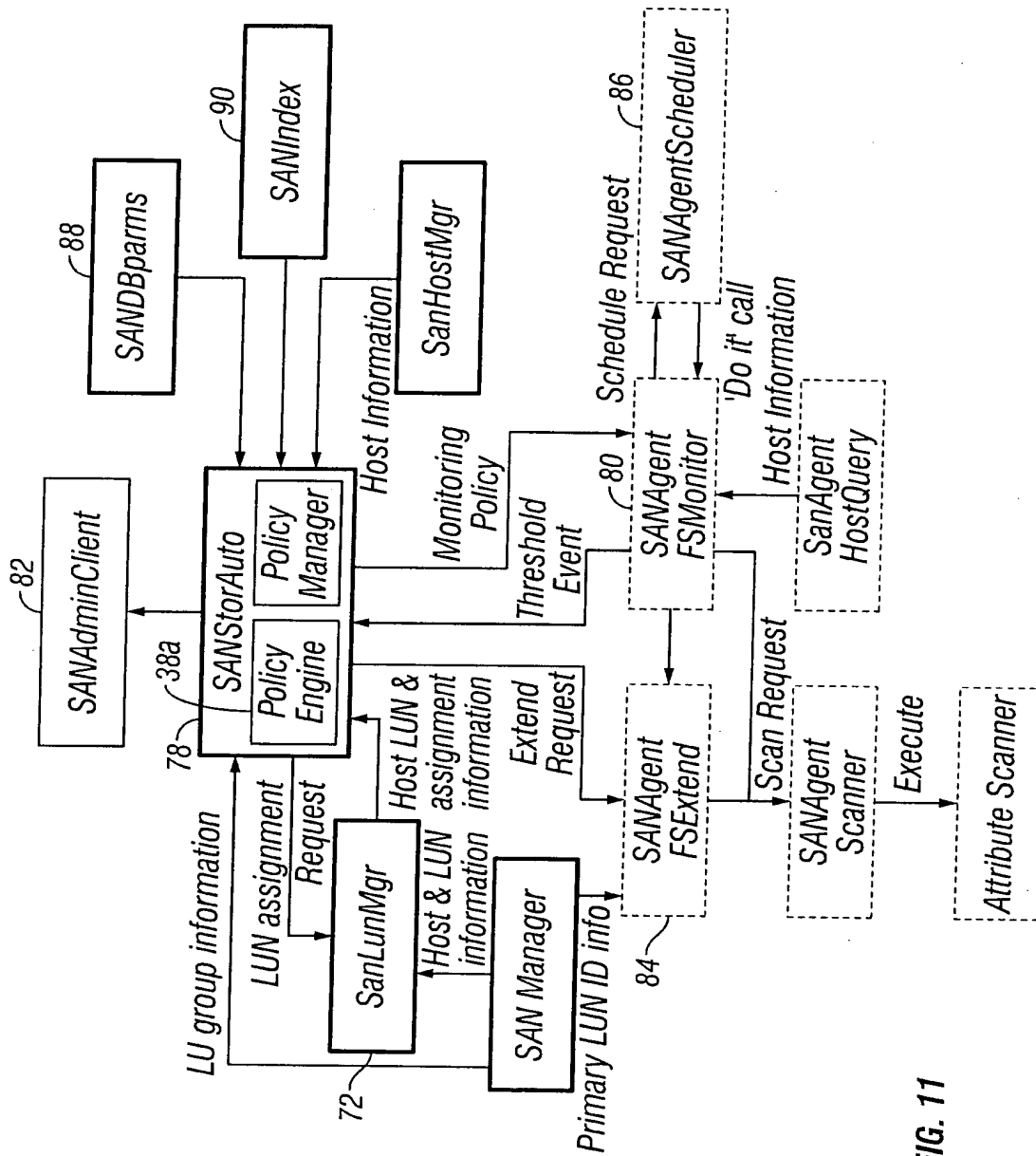


FIG. 11

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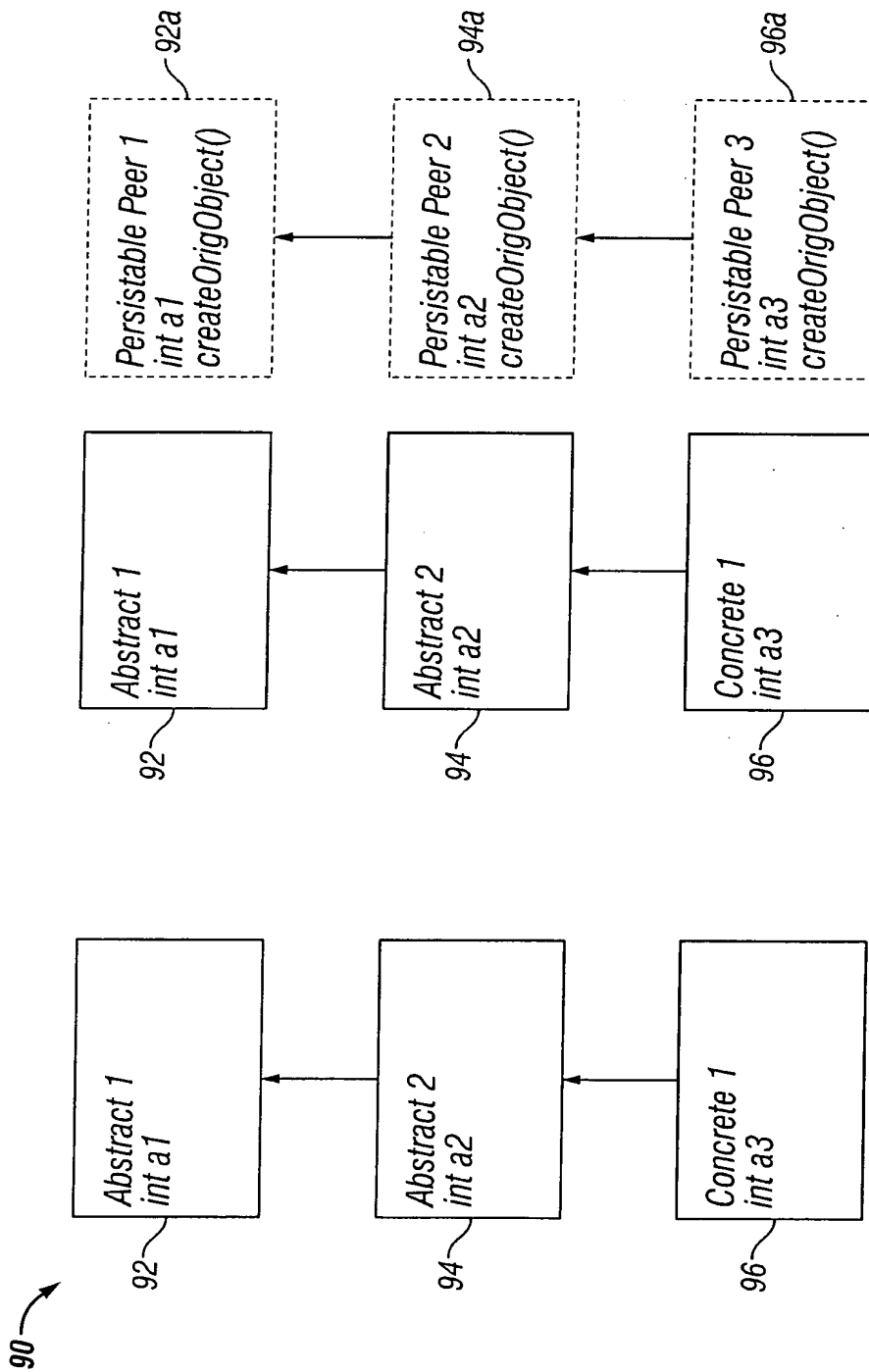


FIG. 12

FIG. 13

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**FIG. 14A**

**FIG. 14B**

**FIG. 14C**

**FIG. 14D**

**FIG. 14**

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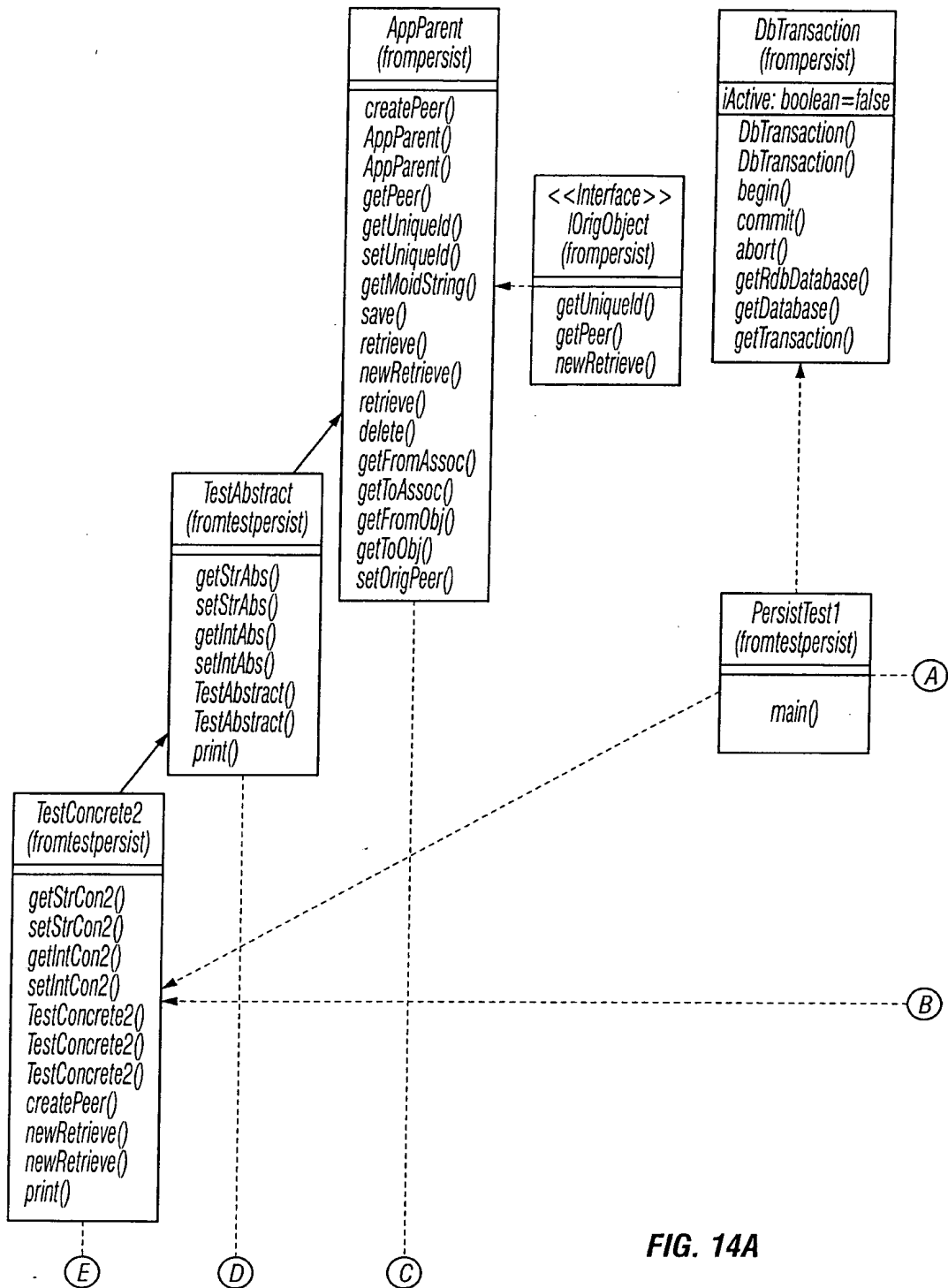


FIG. 14A



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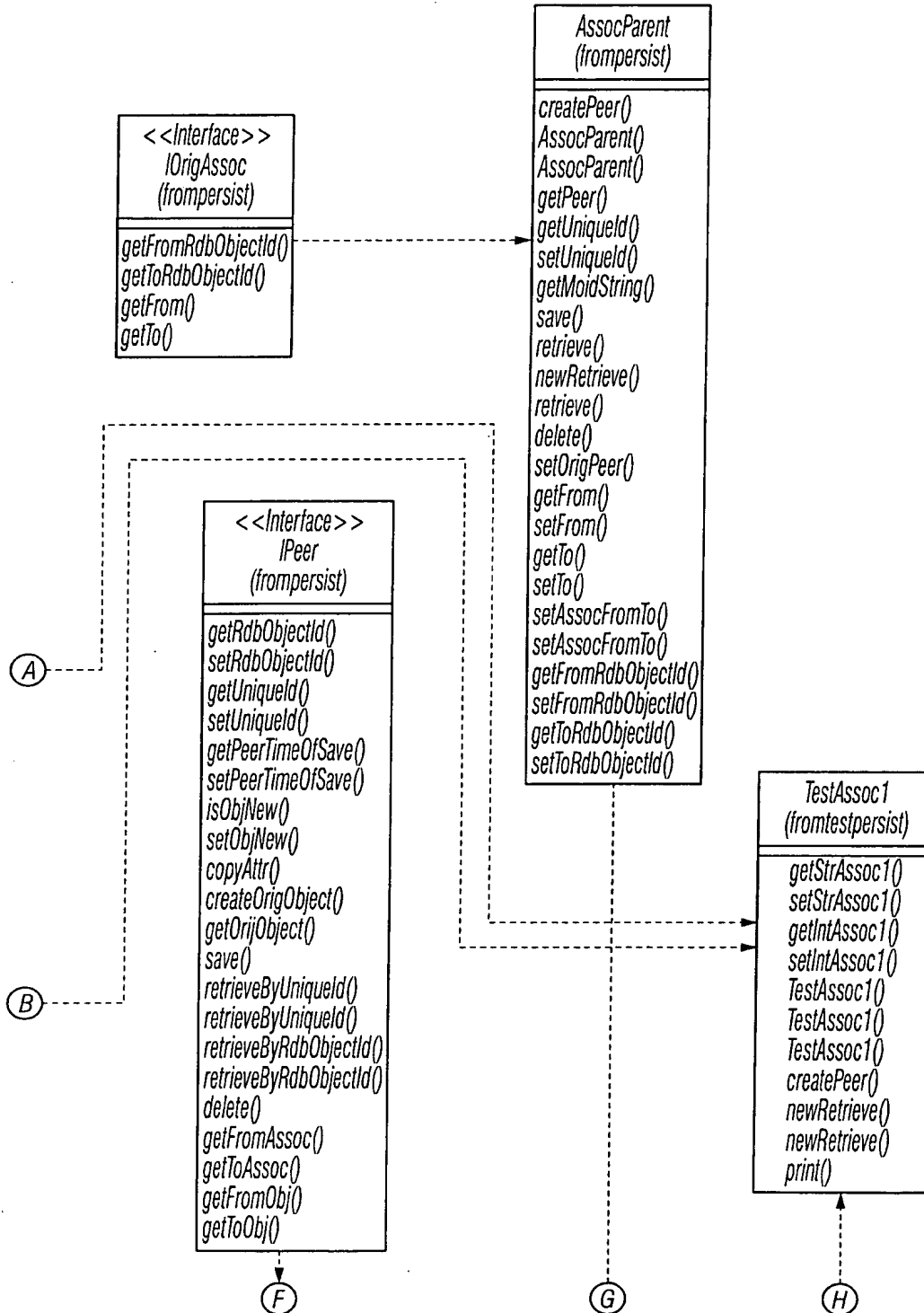


FIG. 14B

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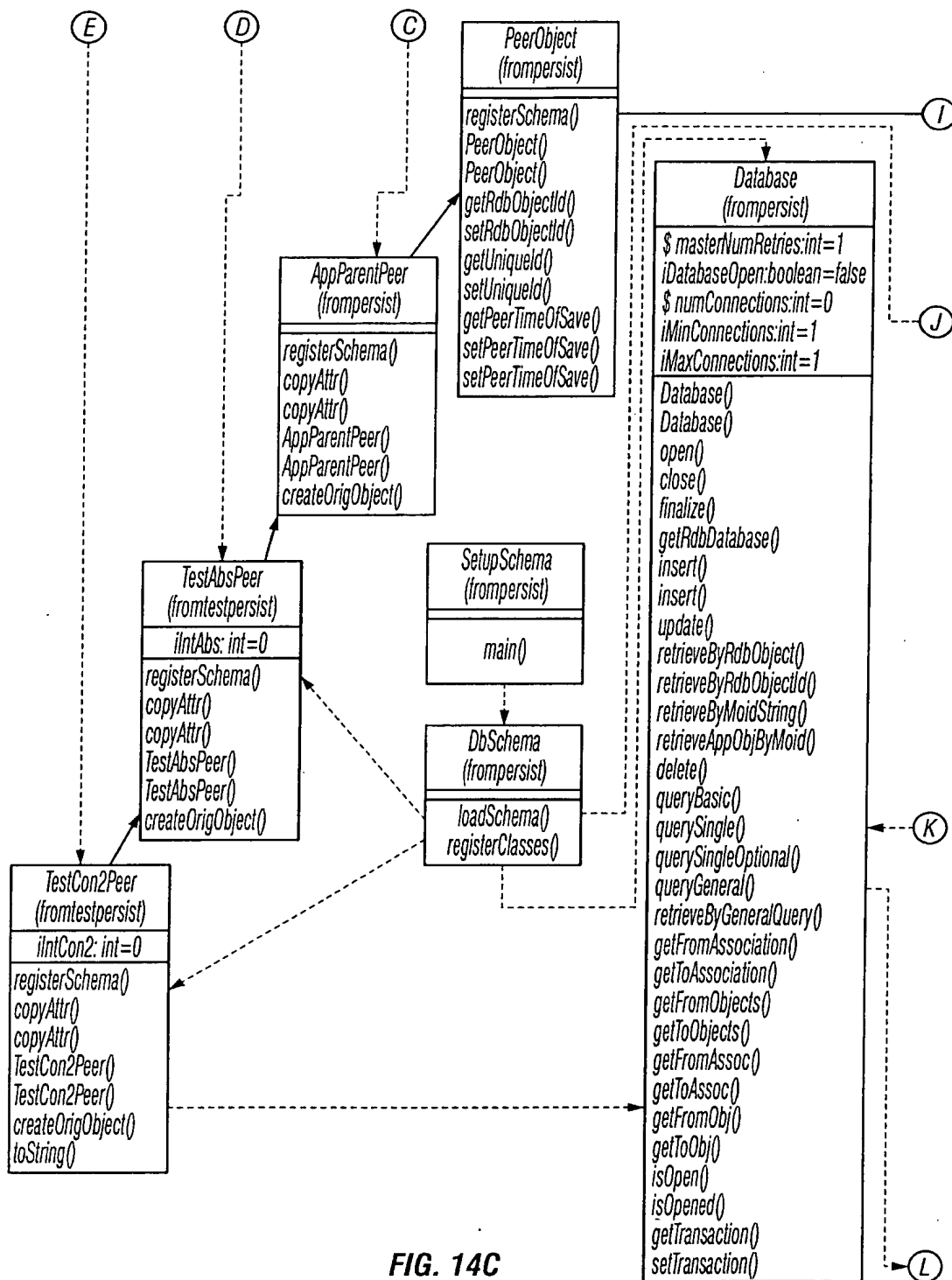


FIG. 14C

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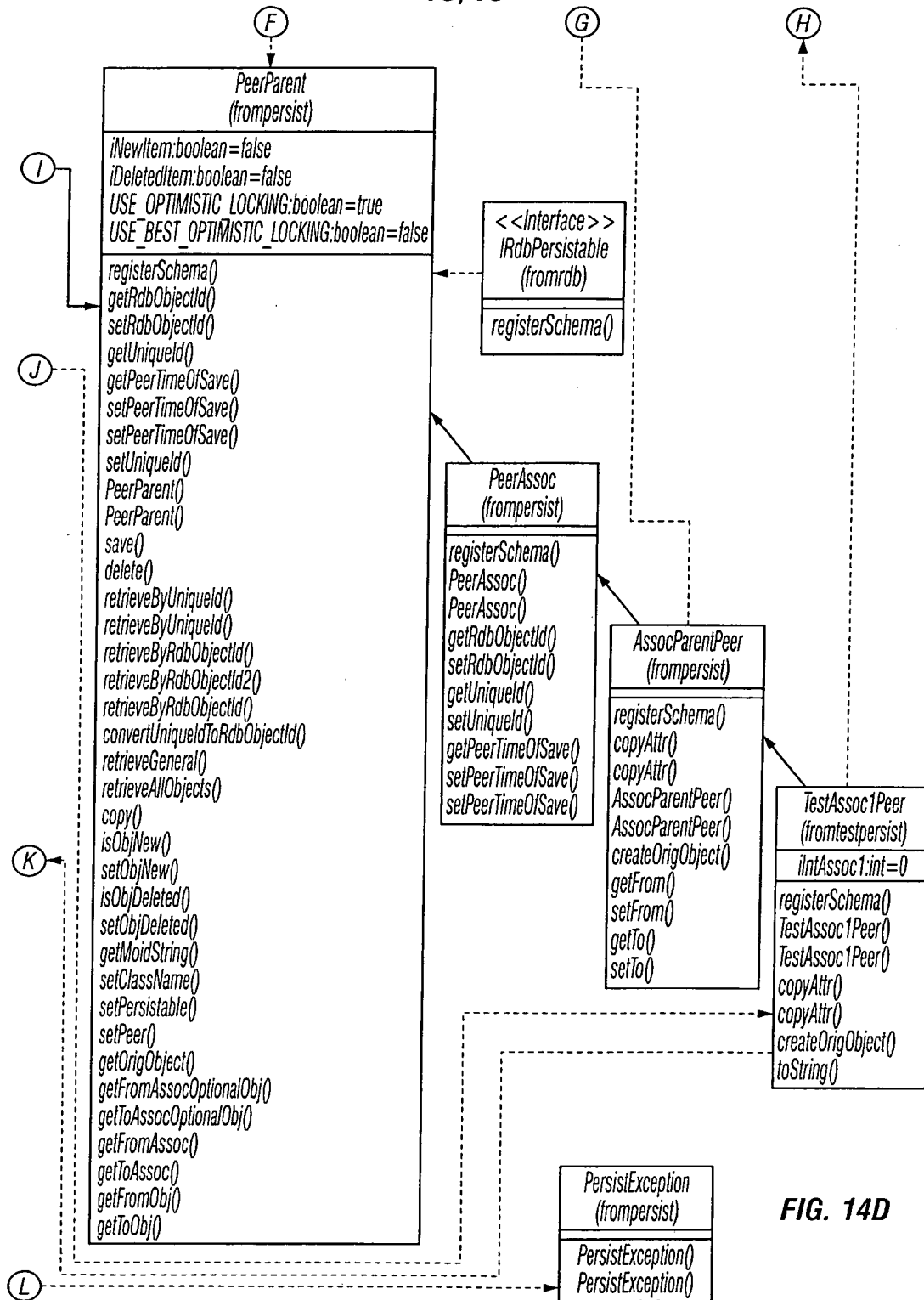
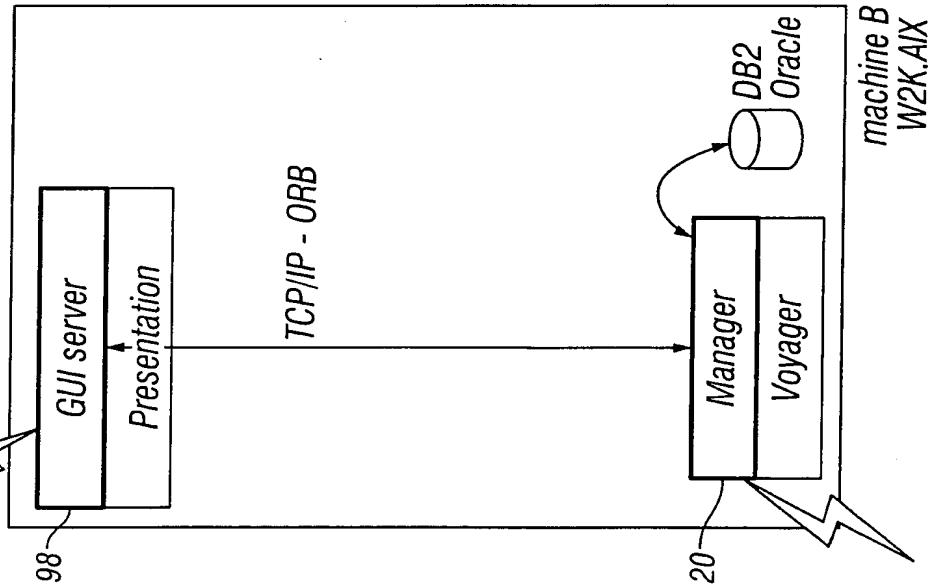


FIG. 14D

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# GUI (server) & Manager communication



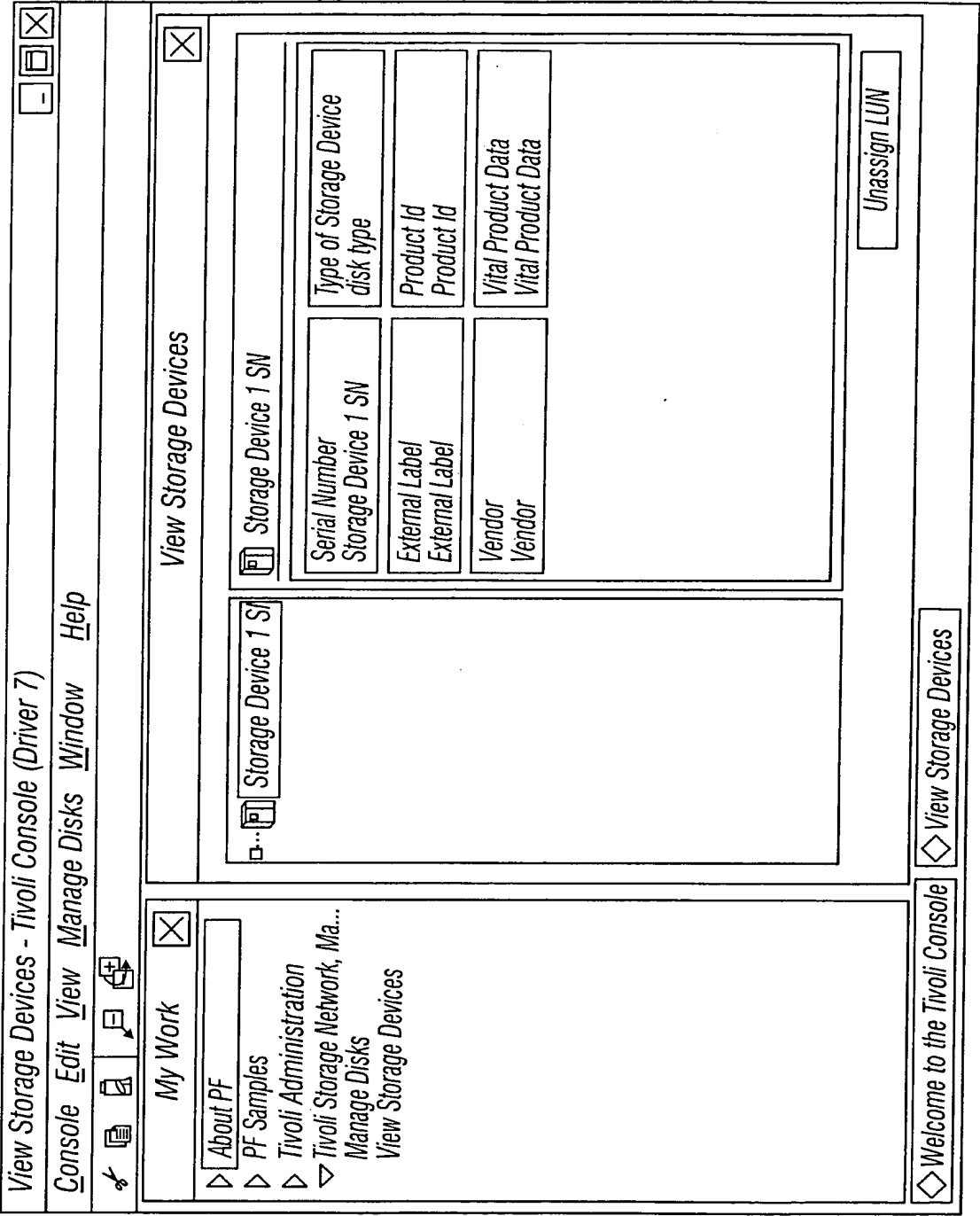
- ▲ Manager creates objects (services) and "bind" them to Voyager directory service
- ▲ GUI "looks up" the object by name in directory service and get the object "proxy"
- ▲ GUI invokes object methods to obtain info or perform operation

Example: Class TDMServer()

```
LUN[] getAccessibleLunsByHost(HostaHost)
LUN[] getAccessibleLunsByHost(java.lang.String ip)
LUN[] getAllAccessibleLuns()
LUN[] getAssignedLunsByHost(HostaHost)
LUN[] getAssignedLunsByHost(java.lang.String ip)
```

```
//Look up the Tdm Server proxy object from the directory service
TdmServerTdm = (Tdm Server) Namespace.lookup(
    "//localhost:9000/sandir/TdmServer");
//Get a list of all LUN objects in the region.
Lun[] temp1 = aTdm.getAllAccessibleLuns();
```

FIG. 15



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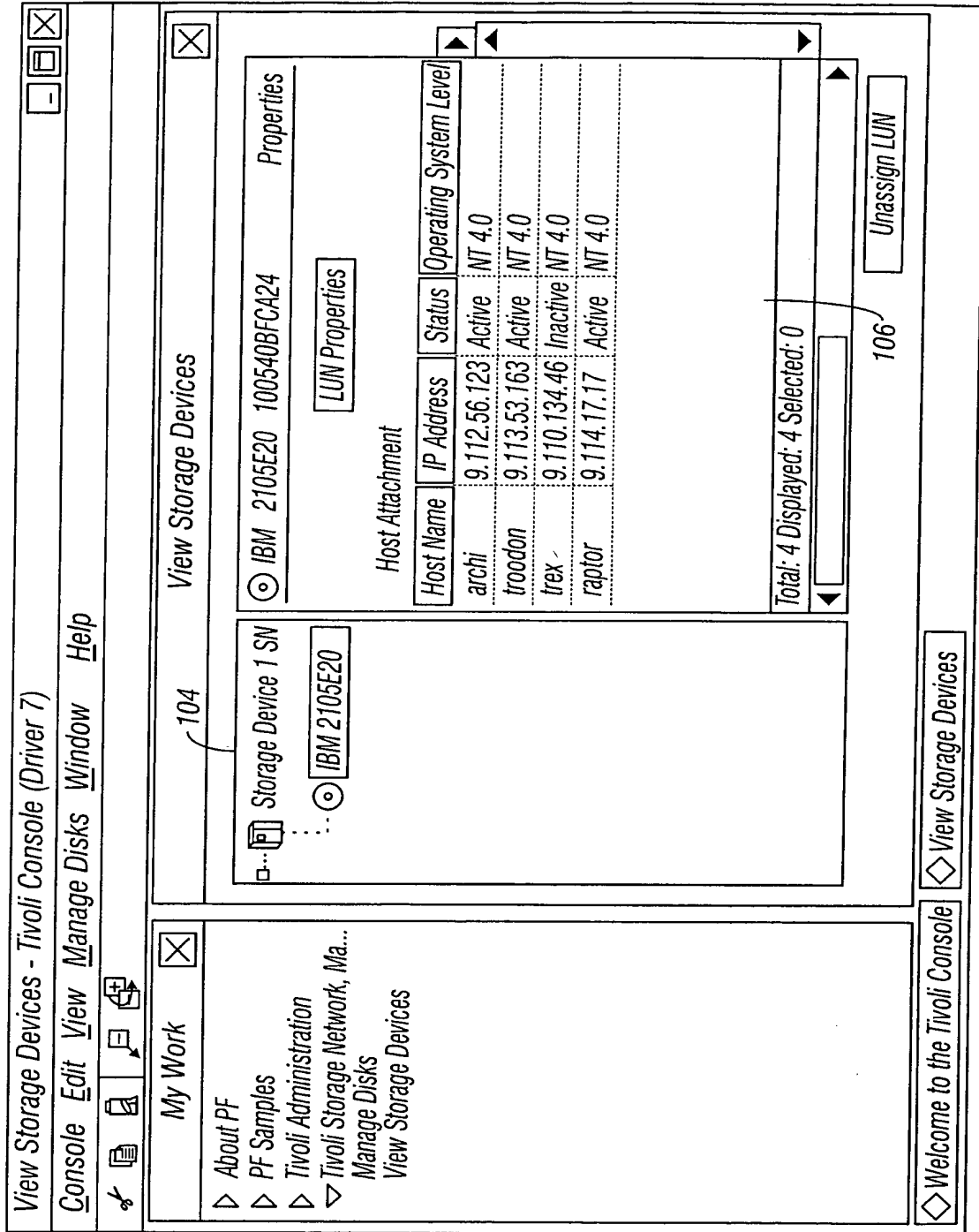
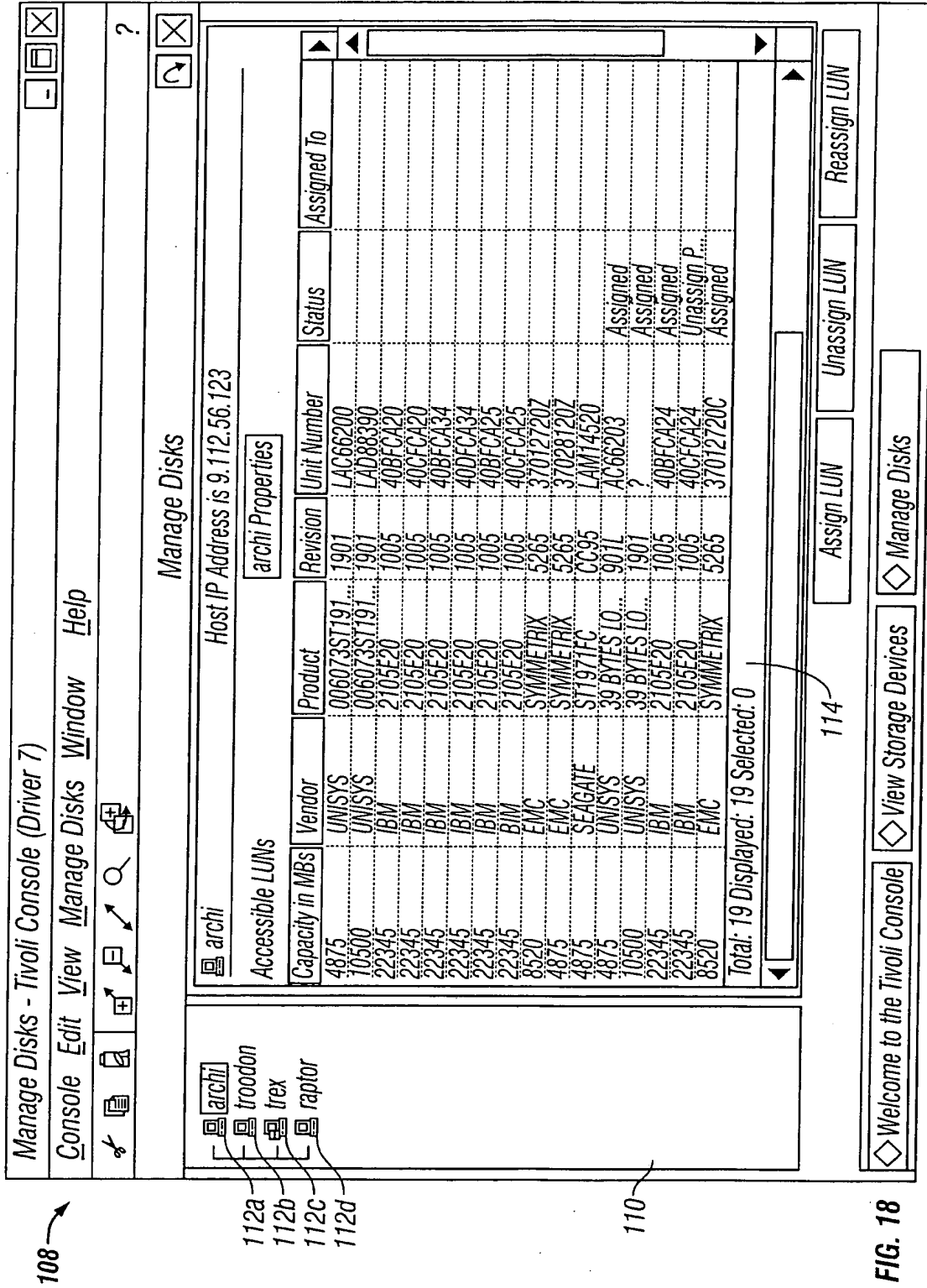


FIG. 17

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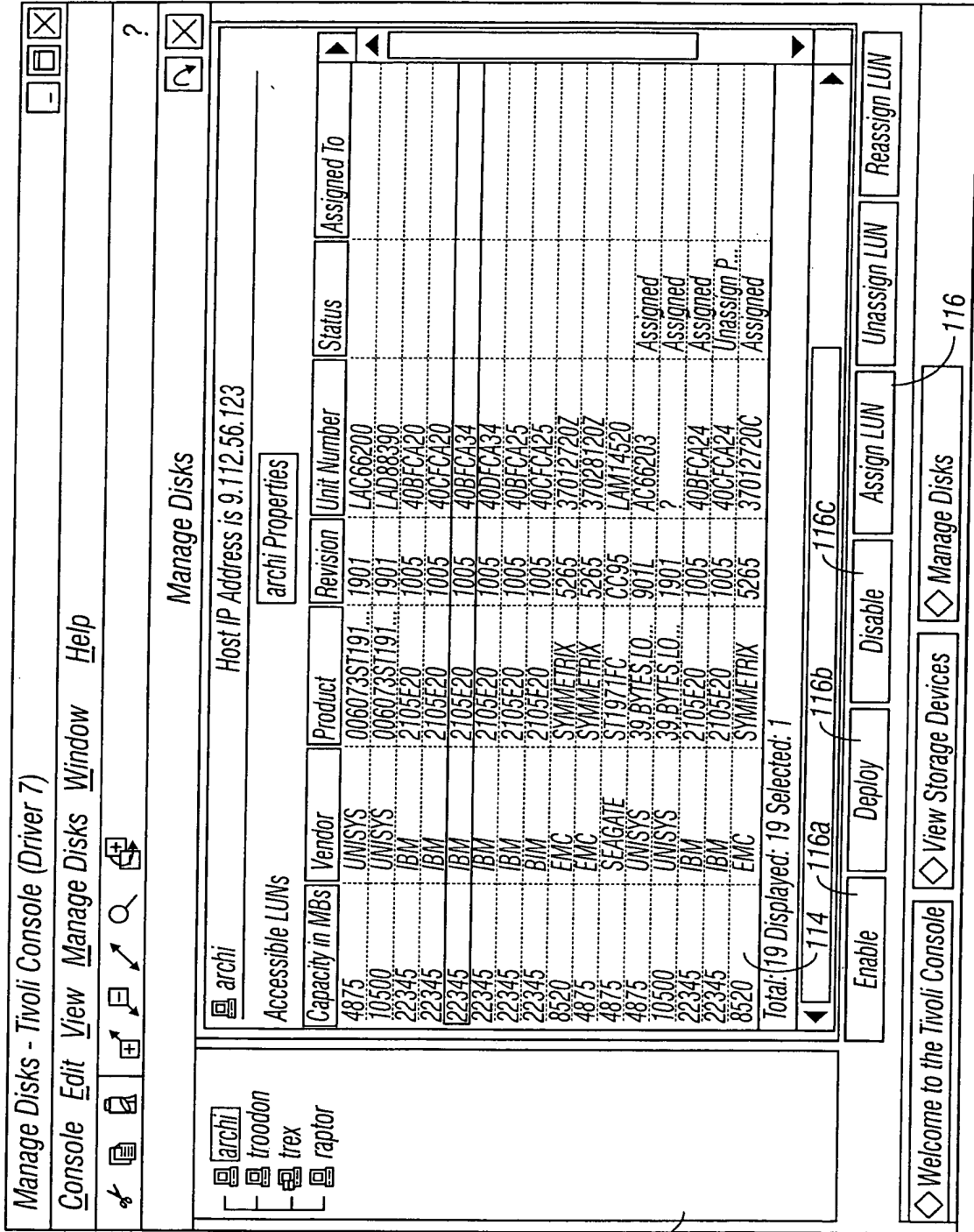


FIG. 19



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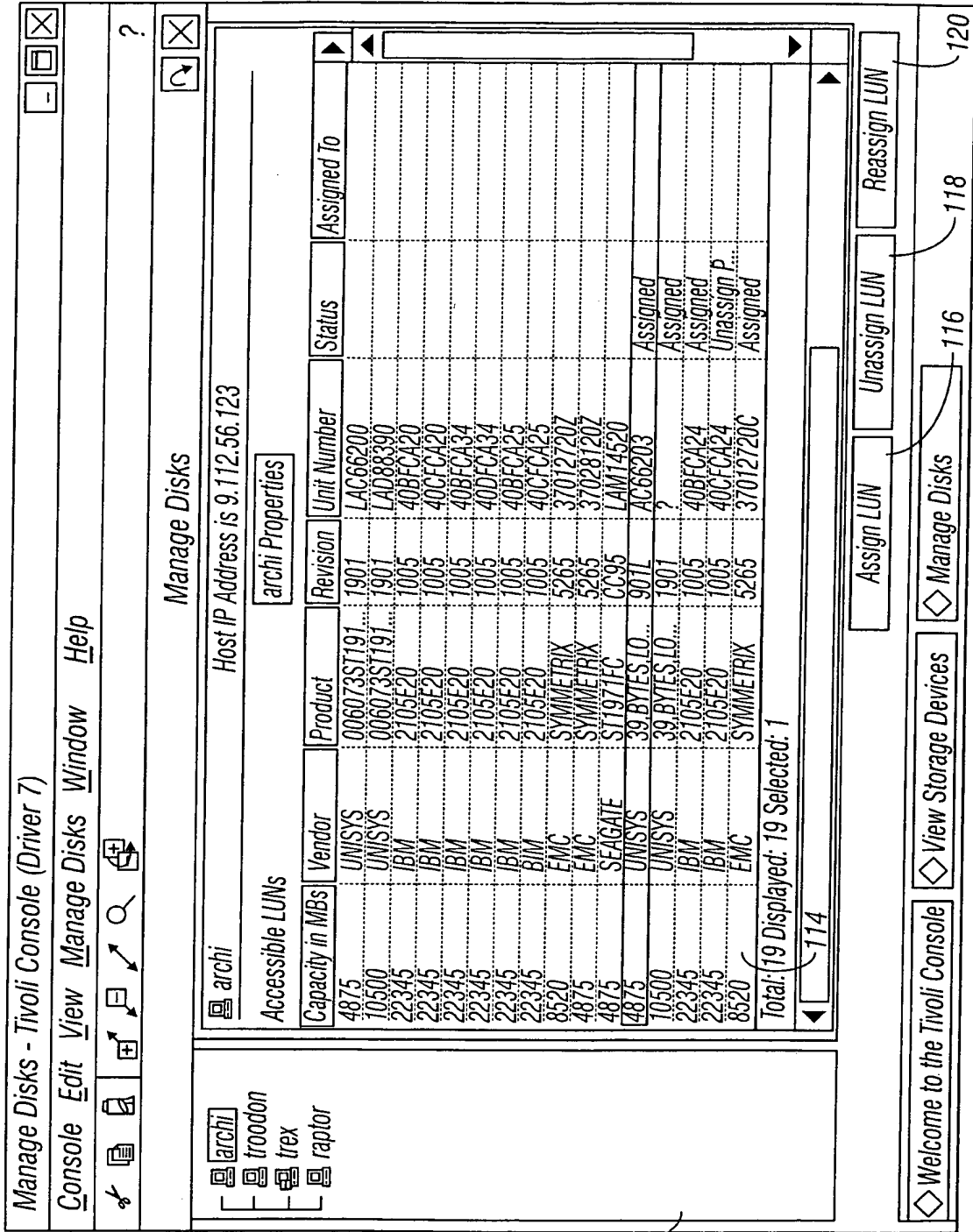
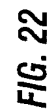


FIG. 20

**FIG. 21**



**FIG. 22**

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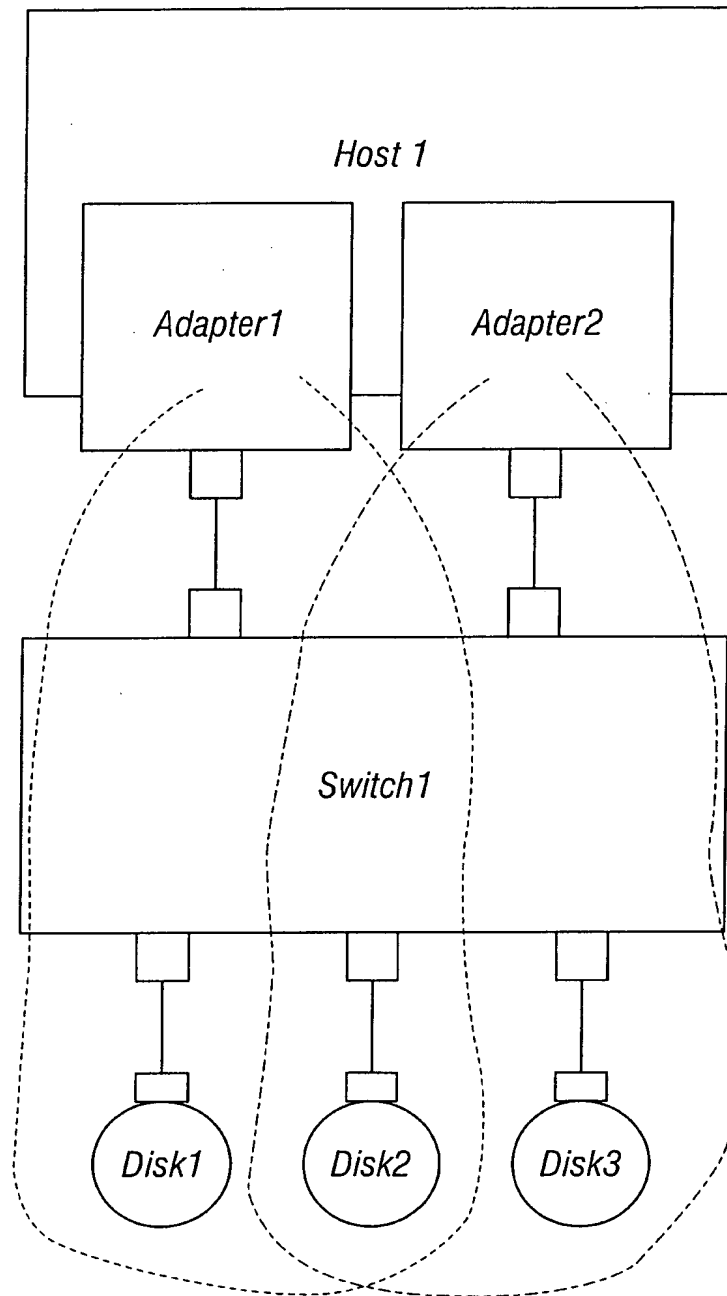


FIG. 23

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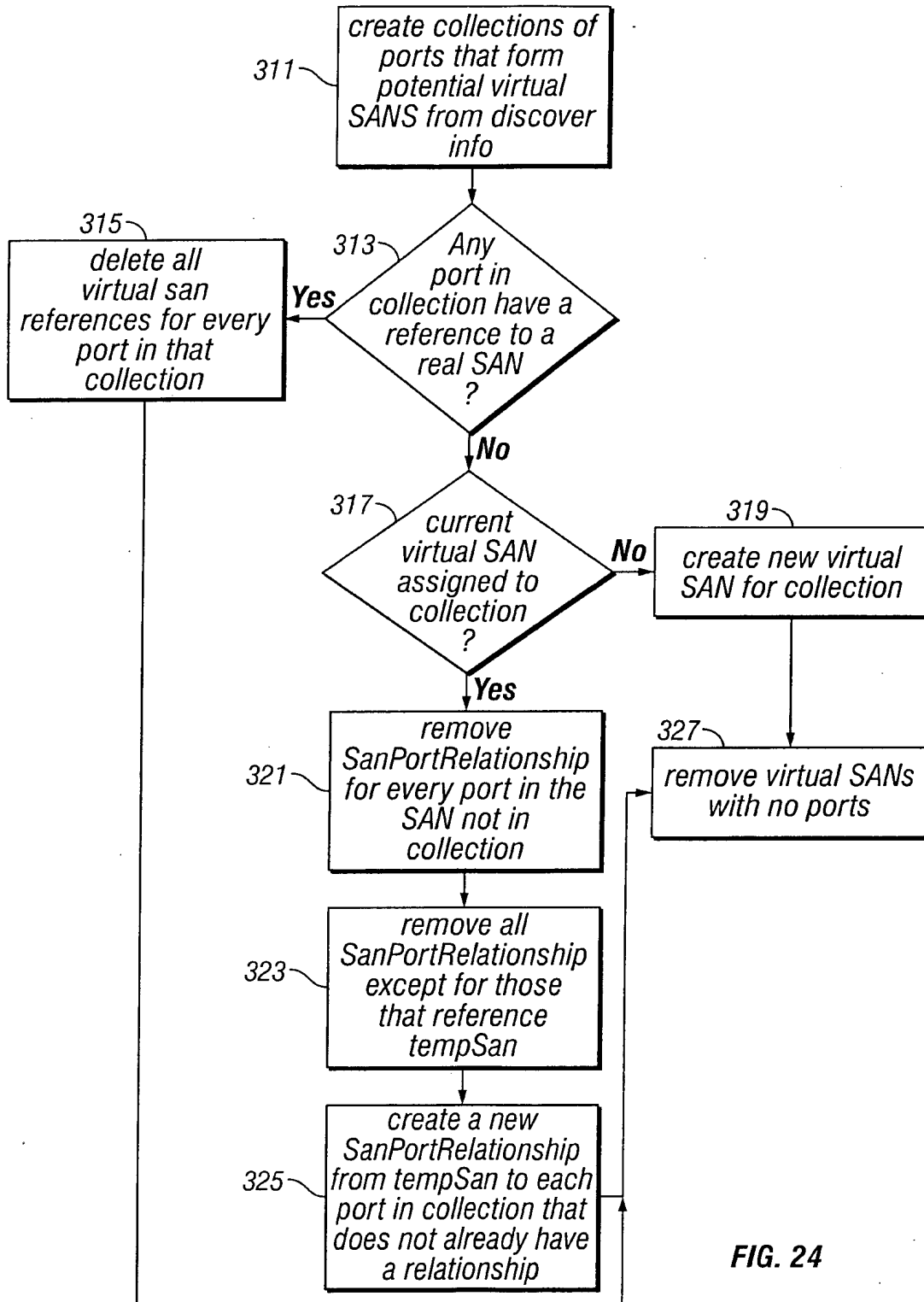


FIG. 24

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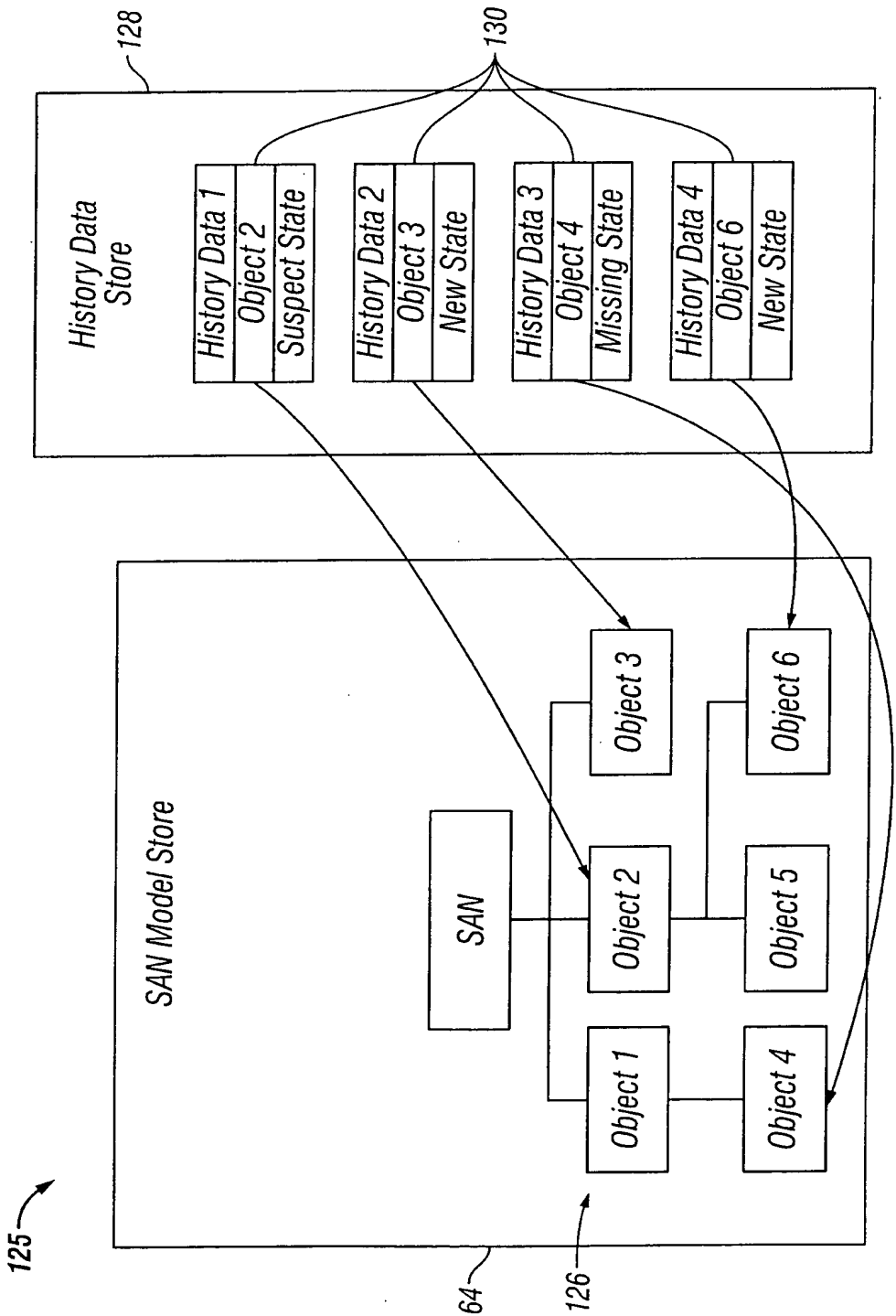


FIG. 25

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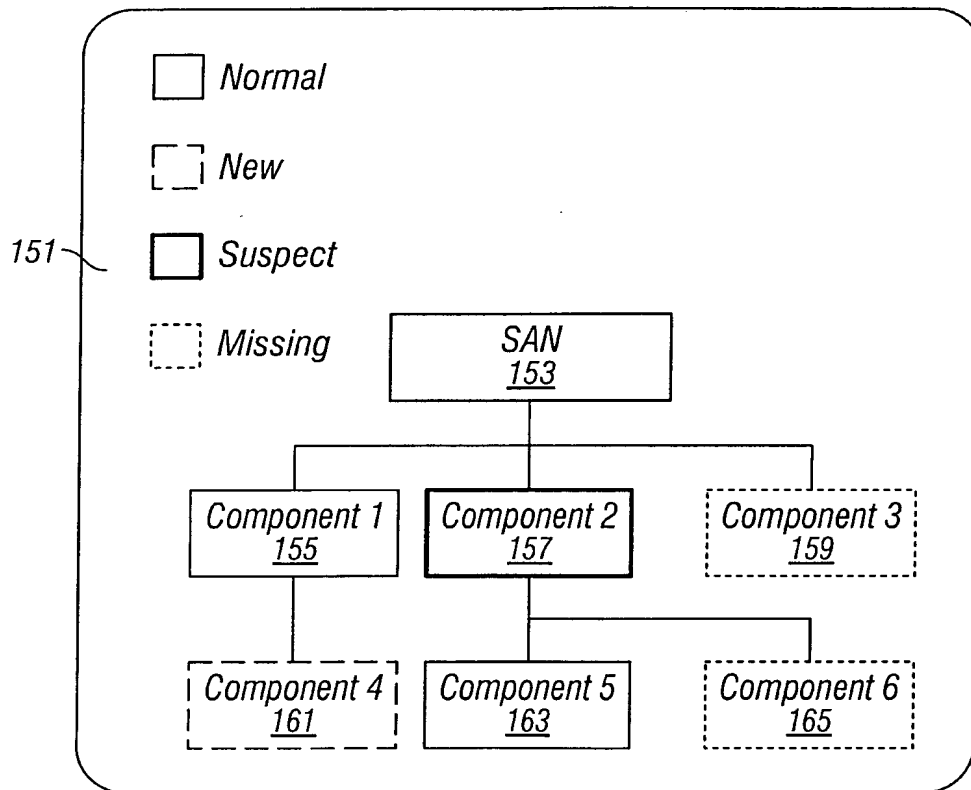


FIG. 26

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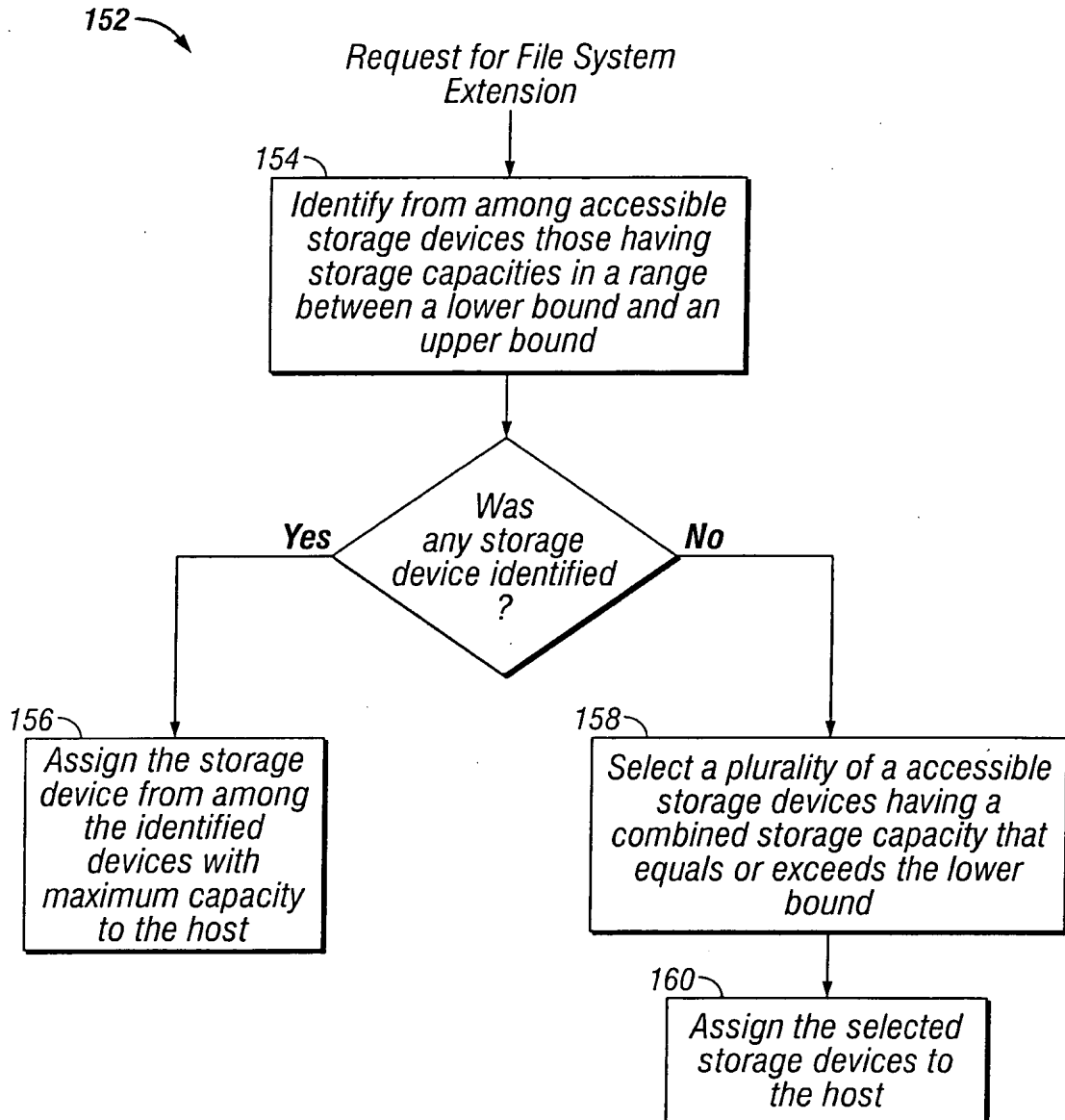


FIG. 27



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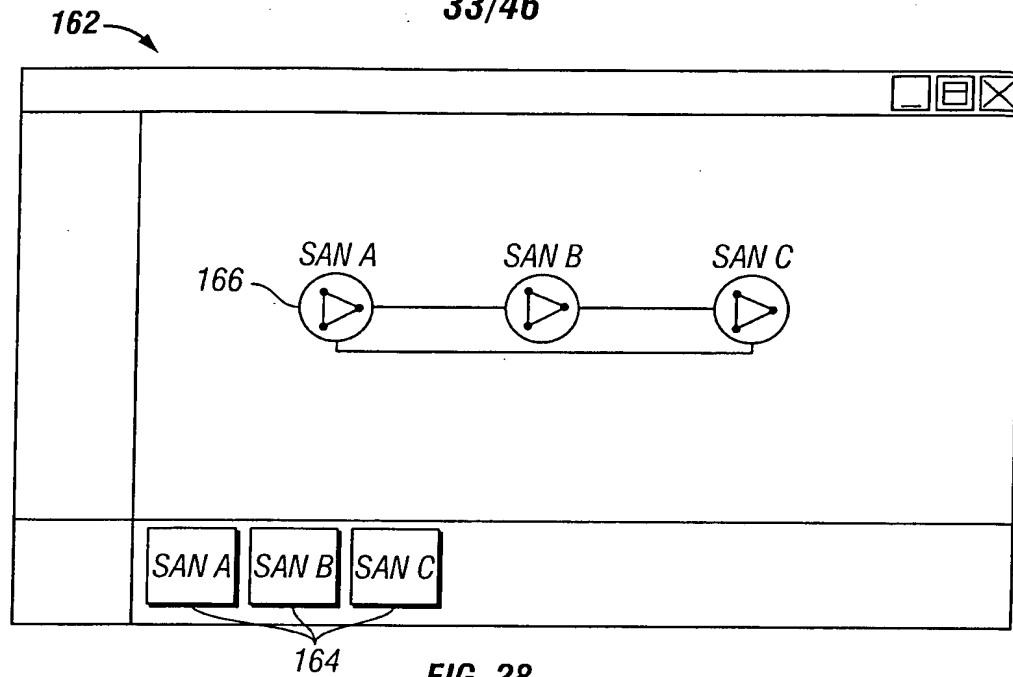


FIG. 28

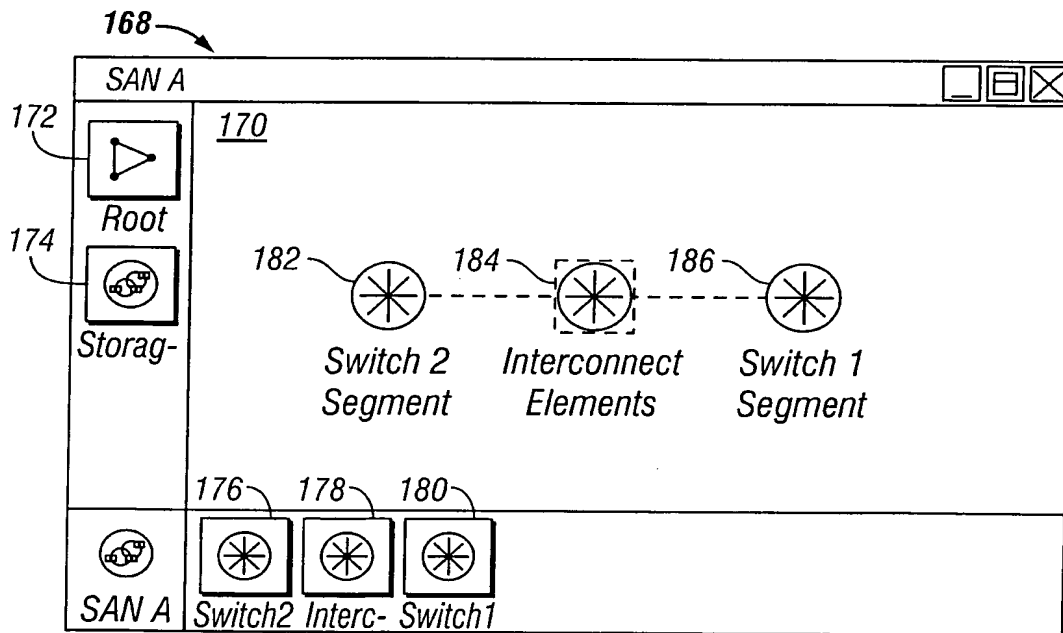


FIG. 29

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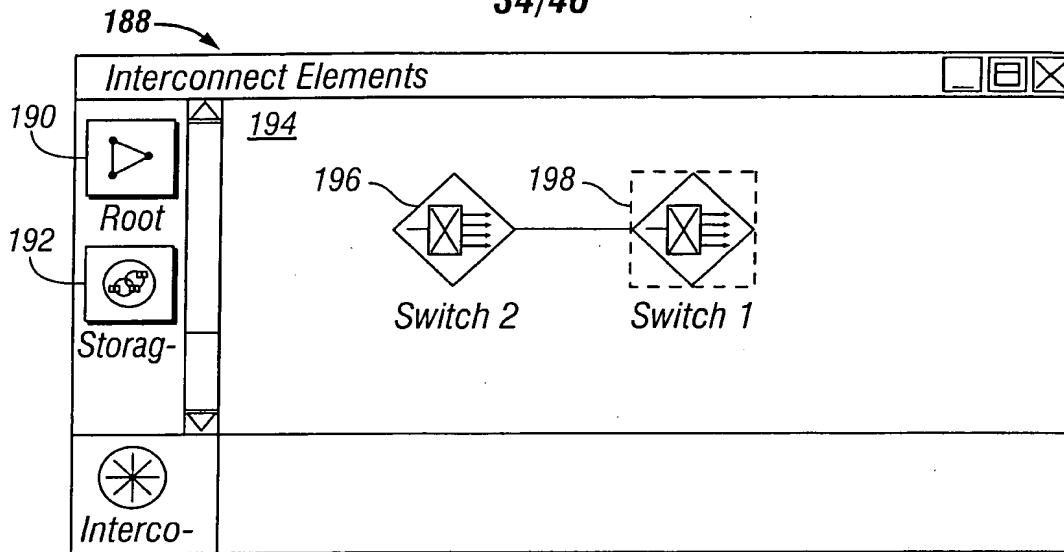


FIG. 30

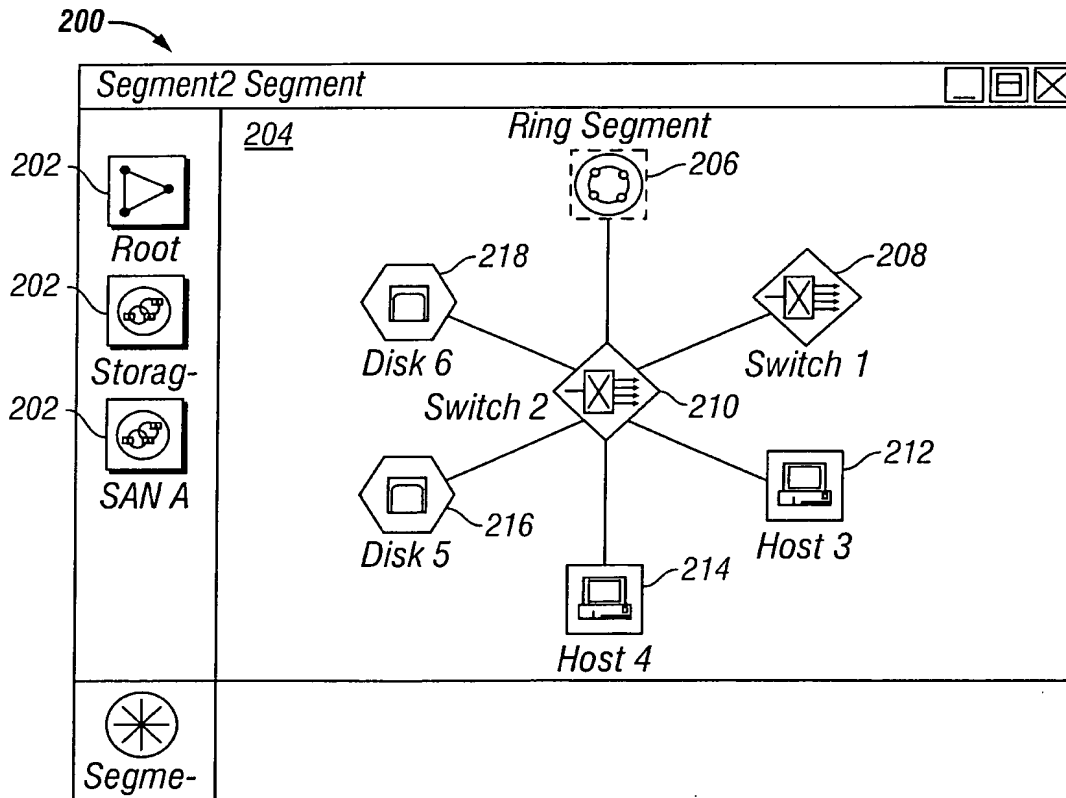


FIG. 31

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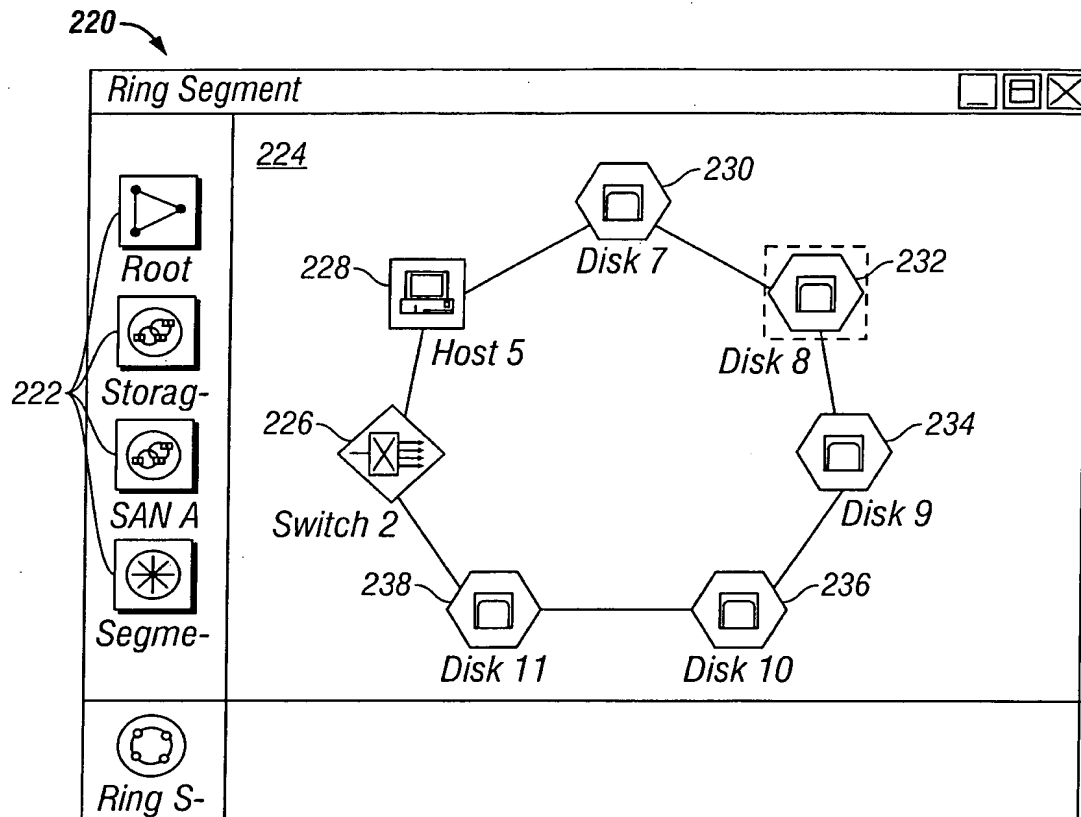


FIG. 32

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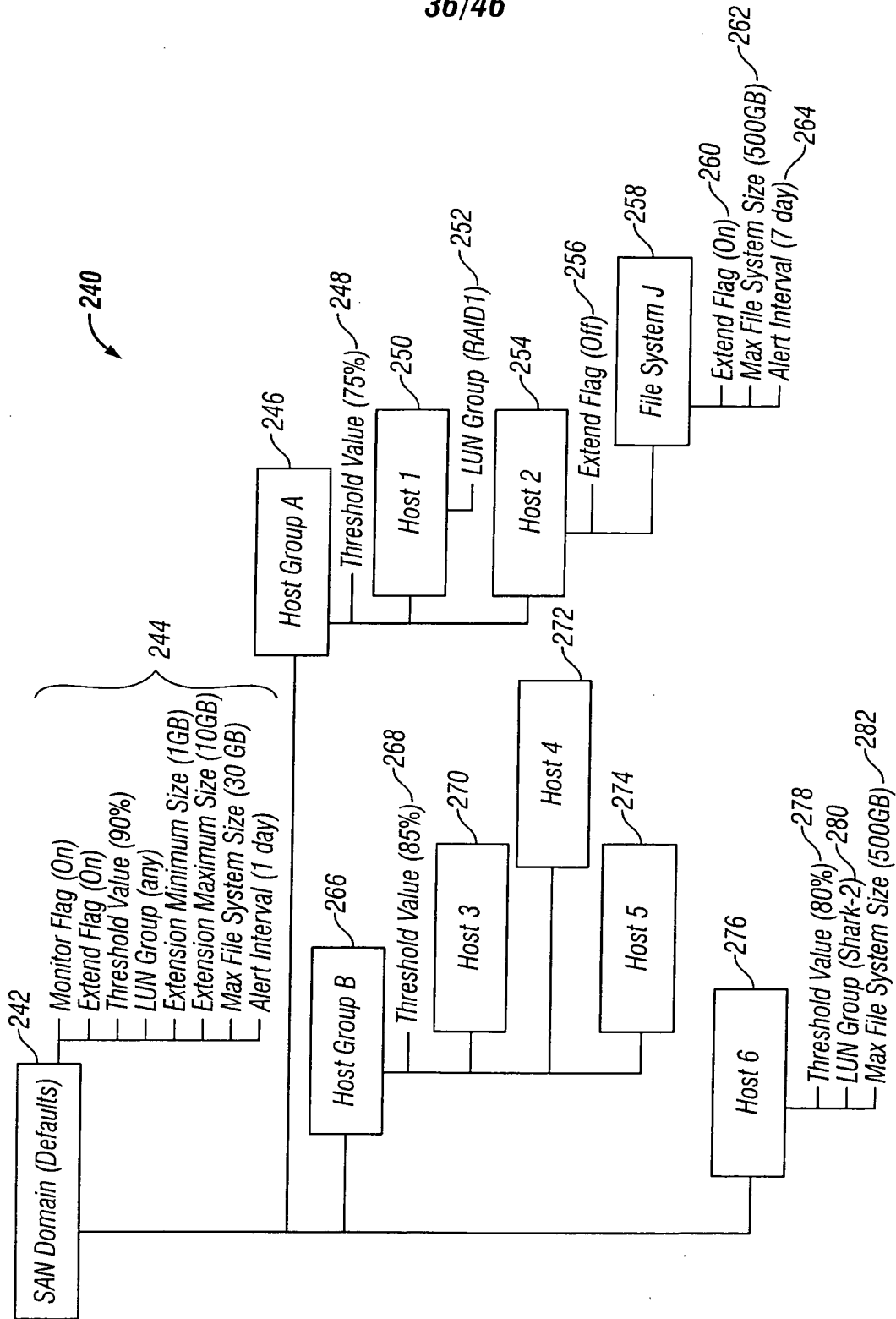


FIG. 33

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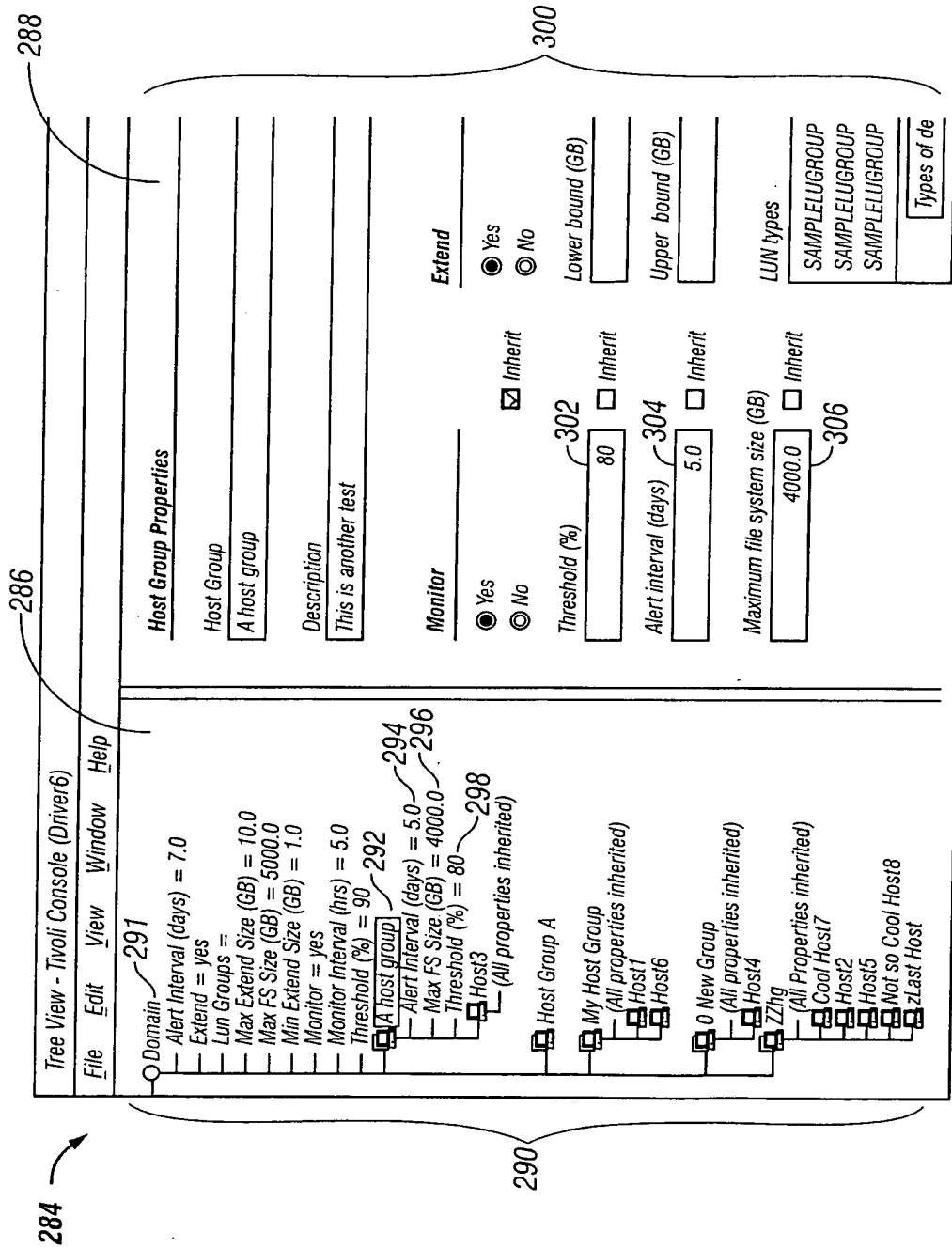


FIG. 34

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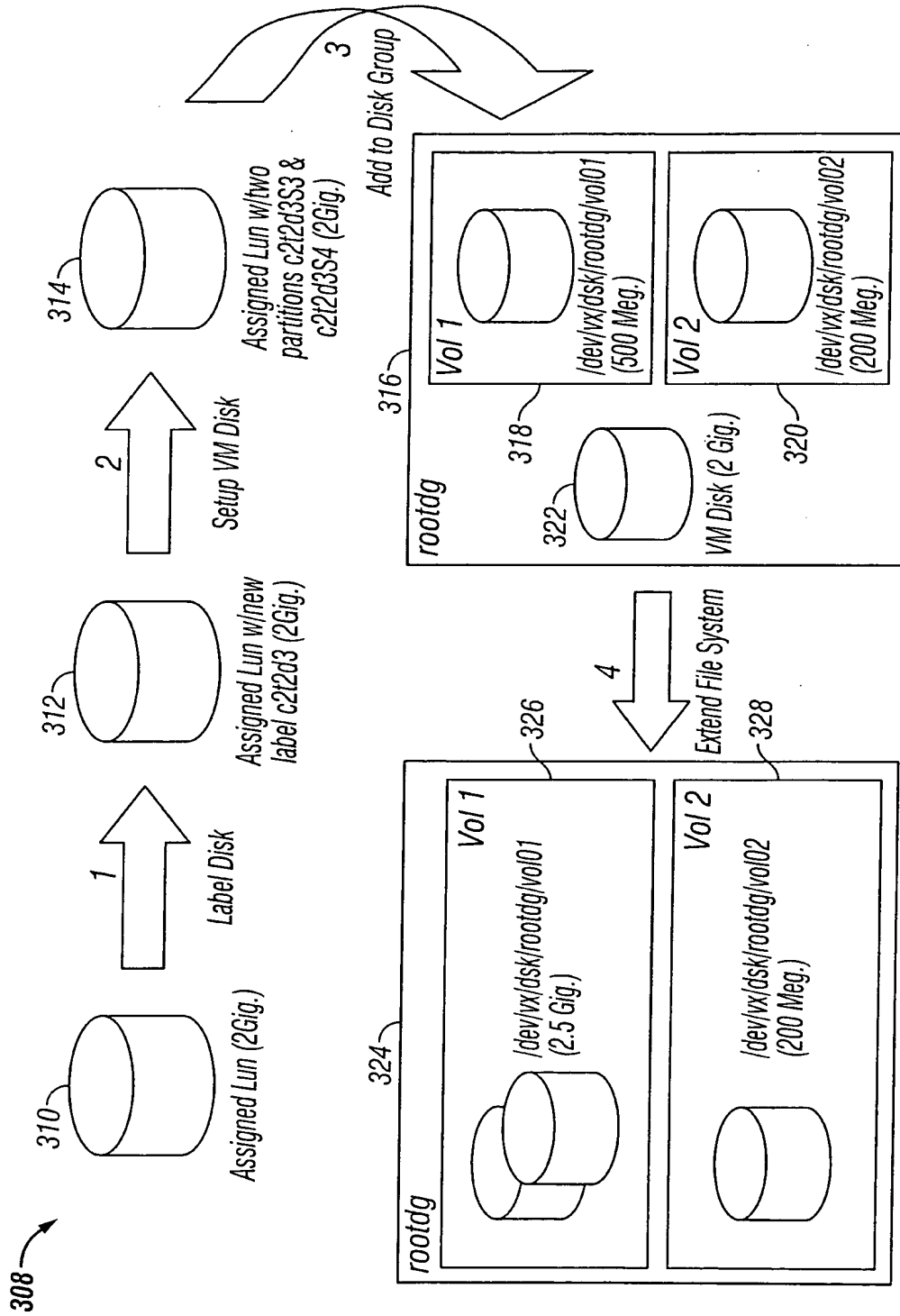


FIG. 35

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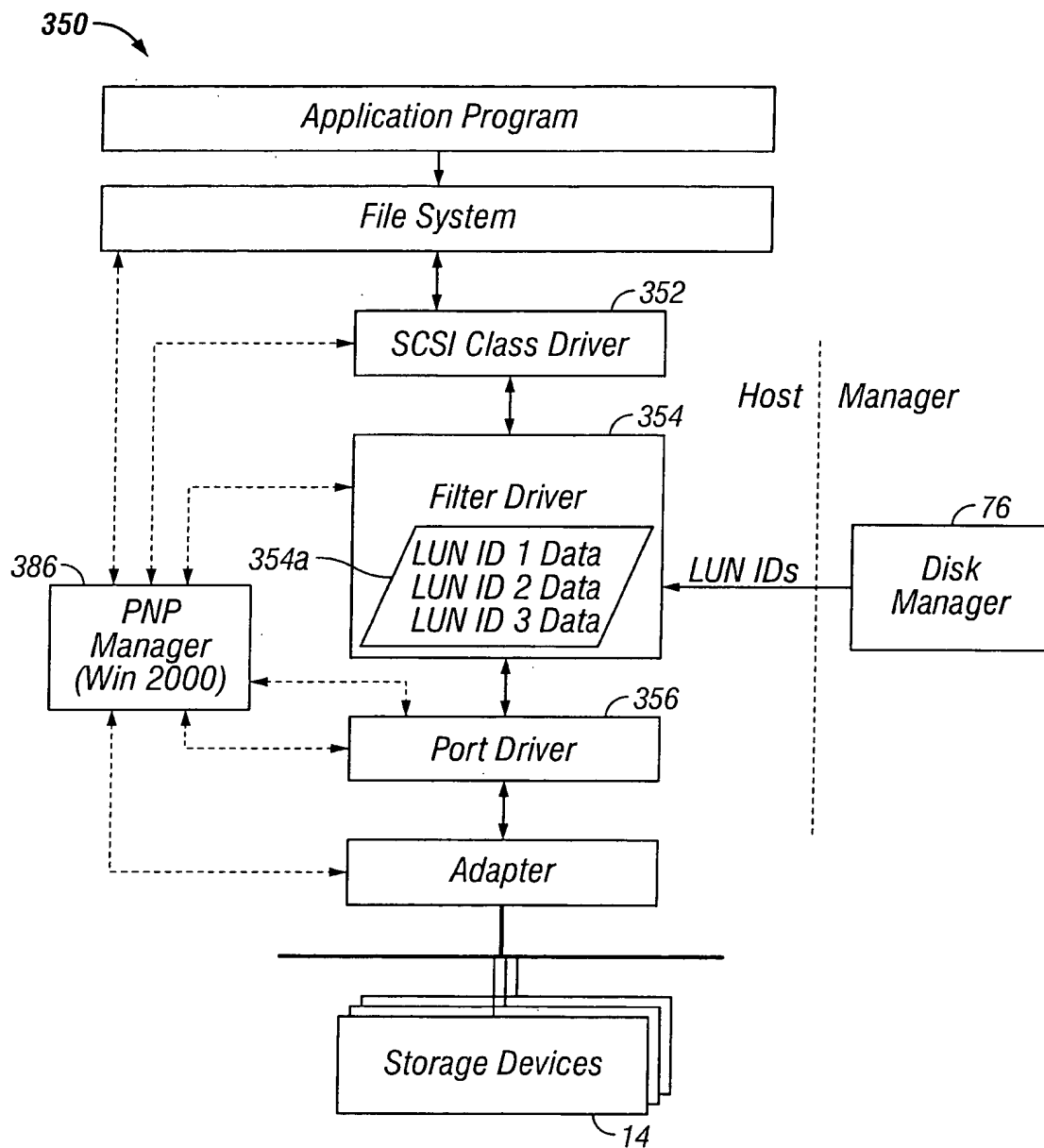


FIG. 36

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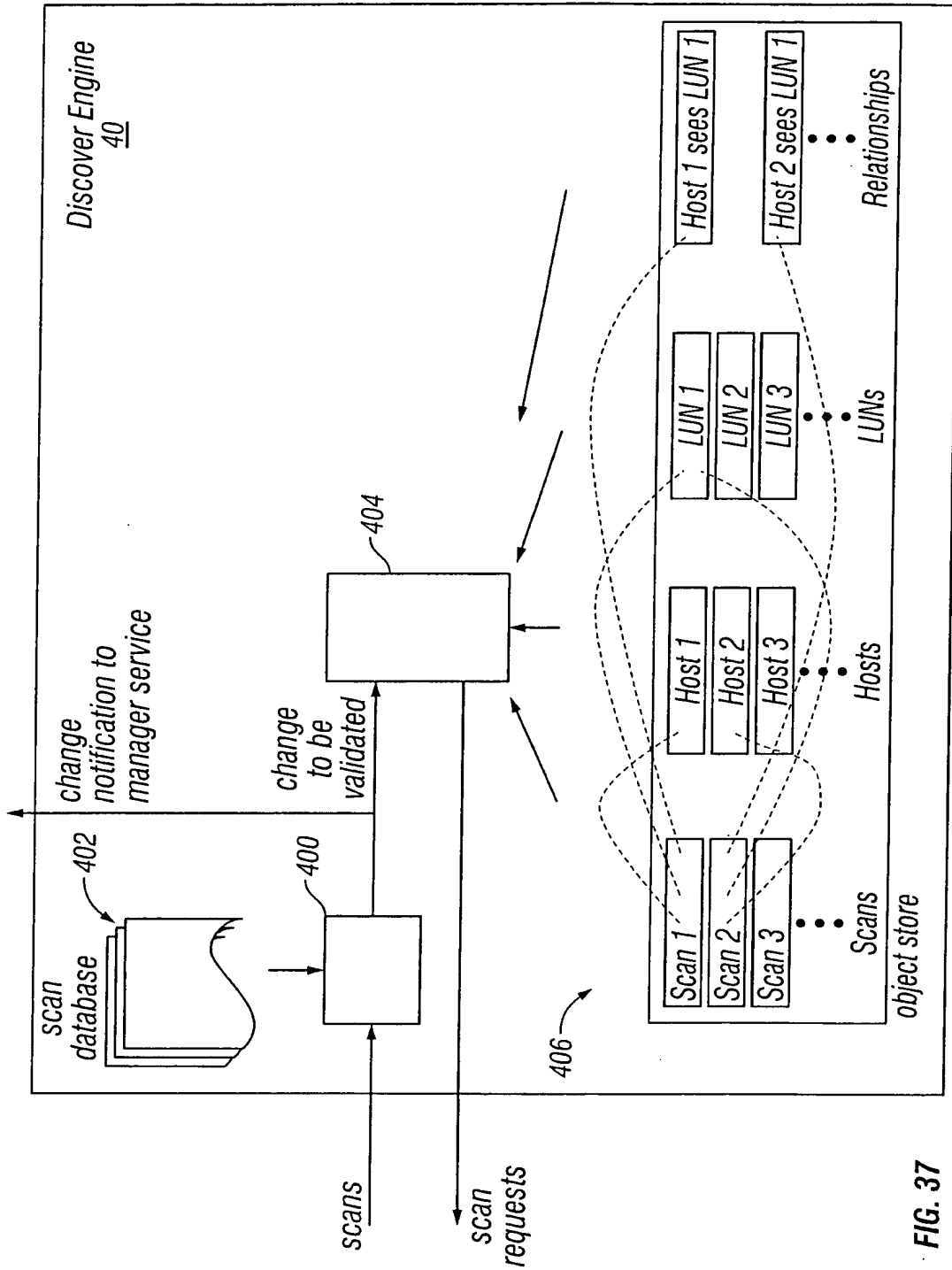


FIG. 37



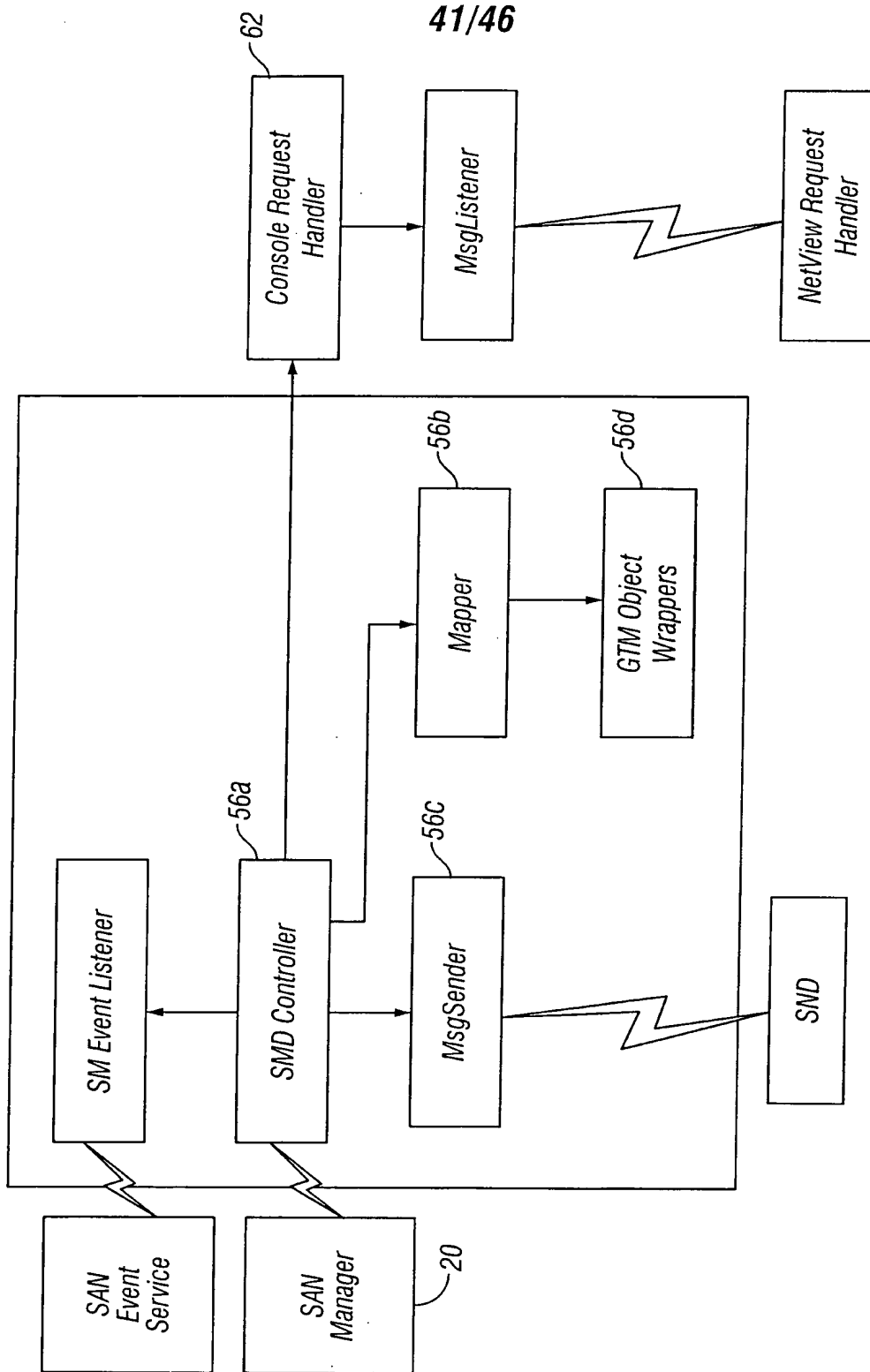


FIG. 38

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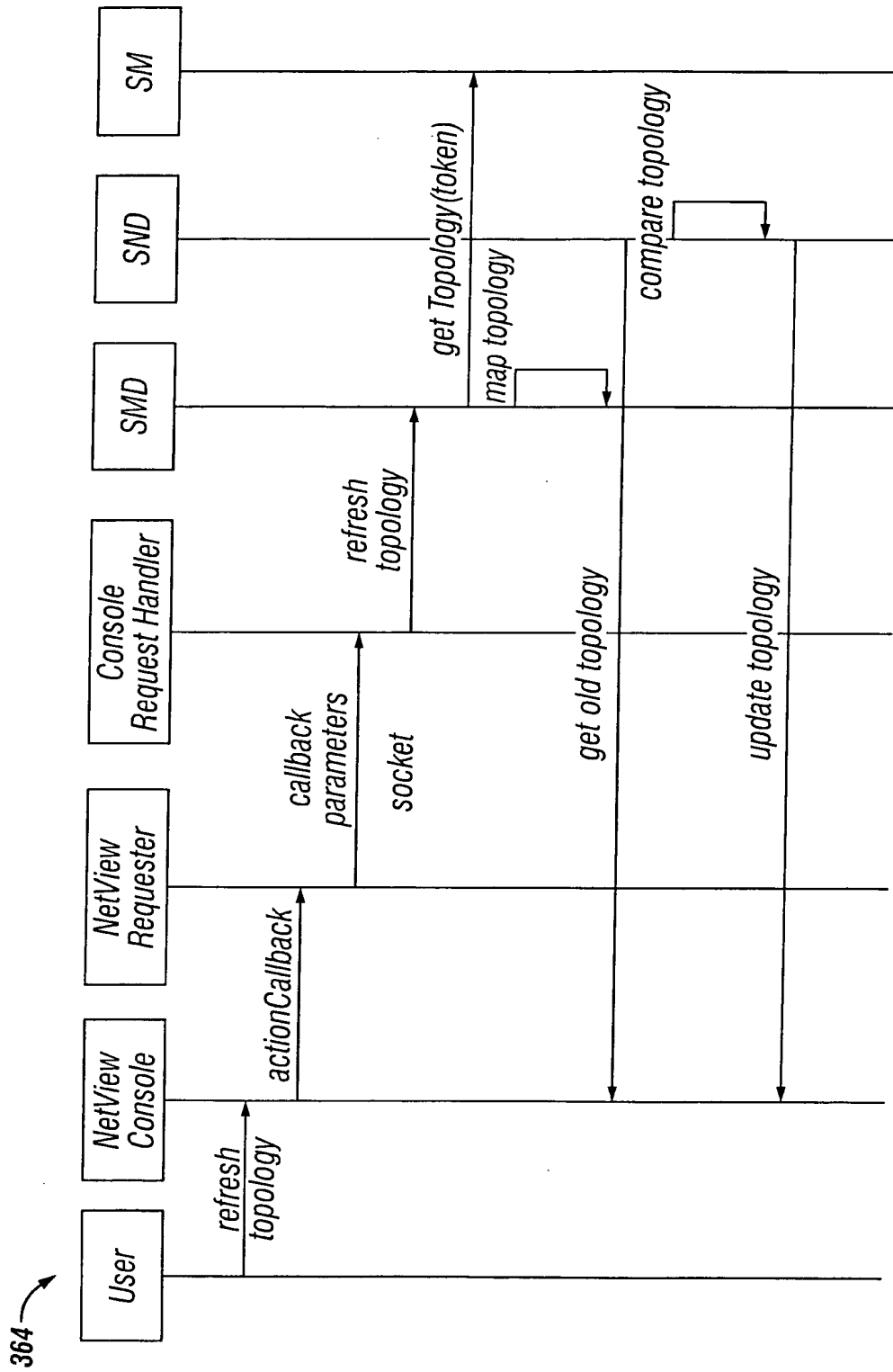


FIG. 39

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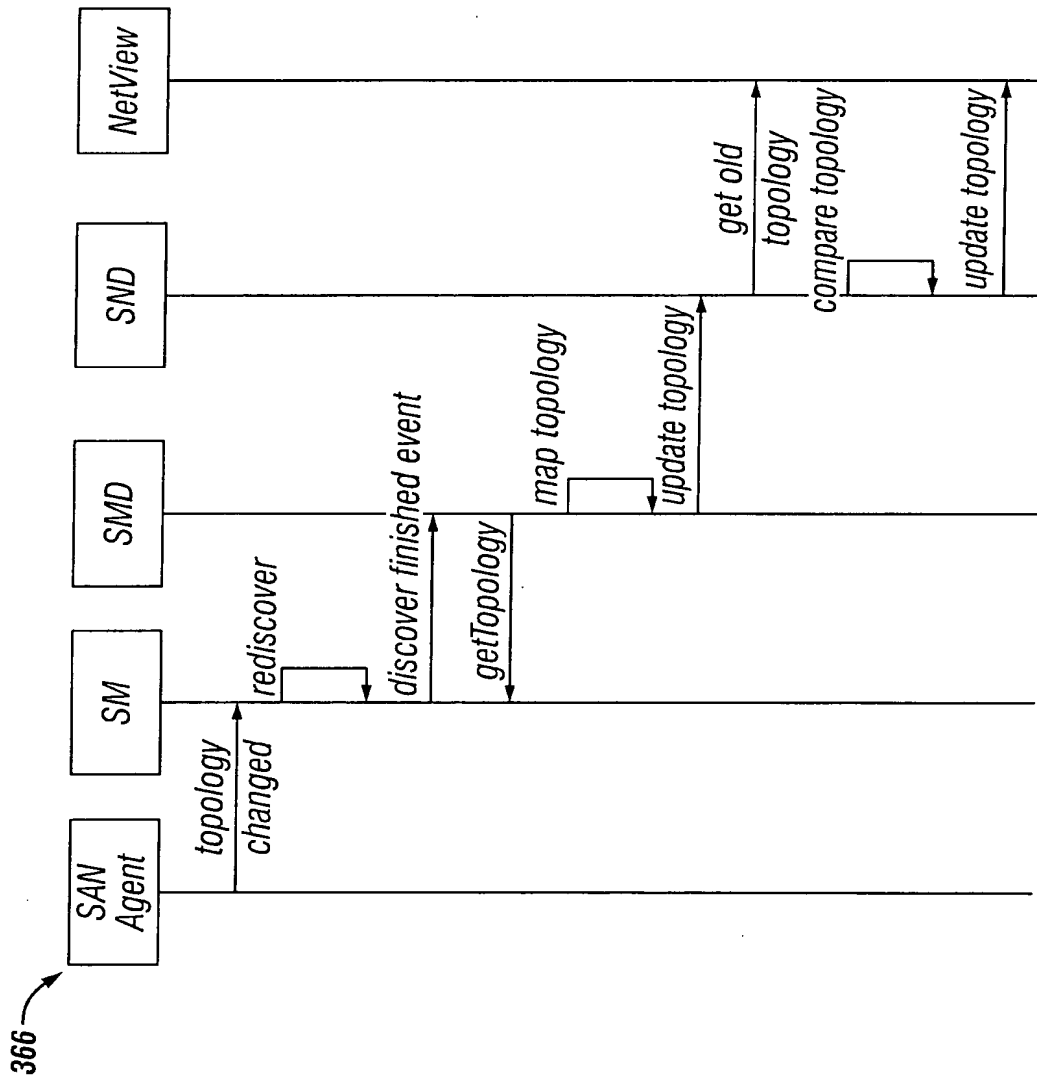
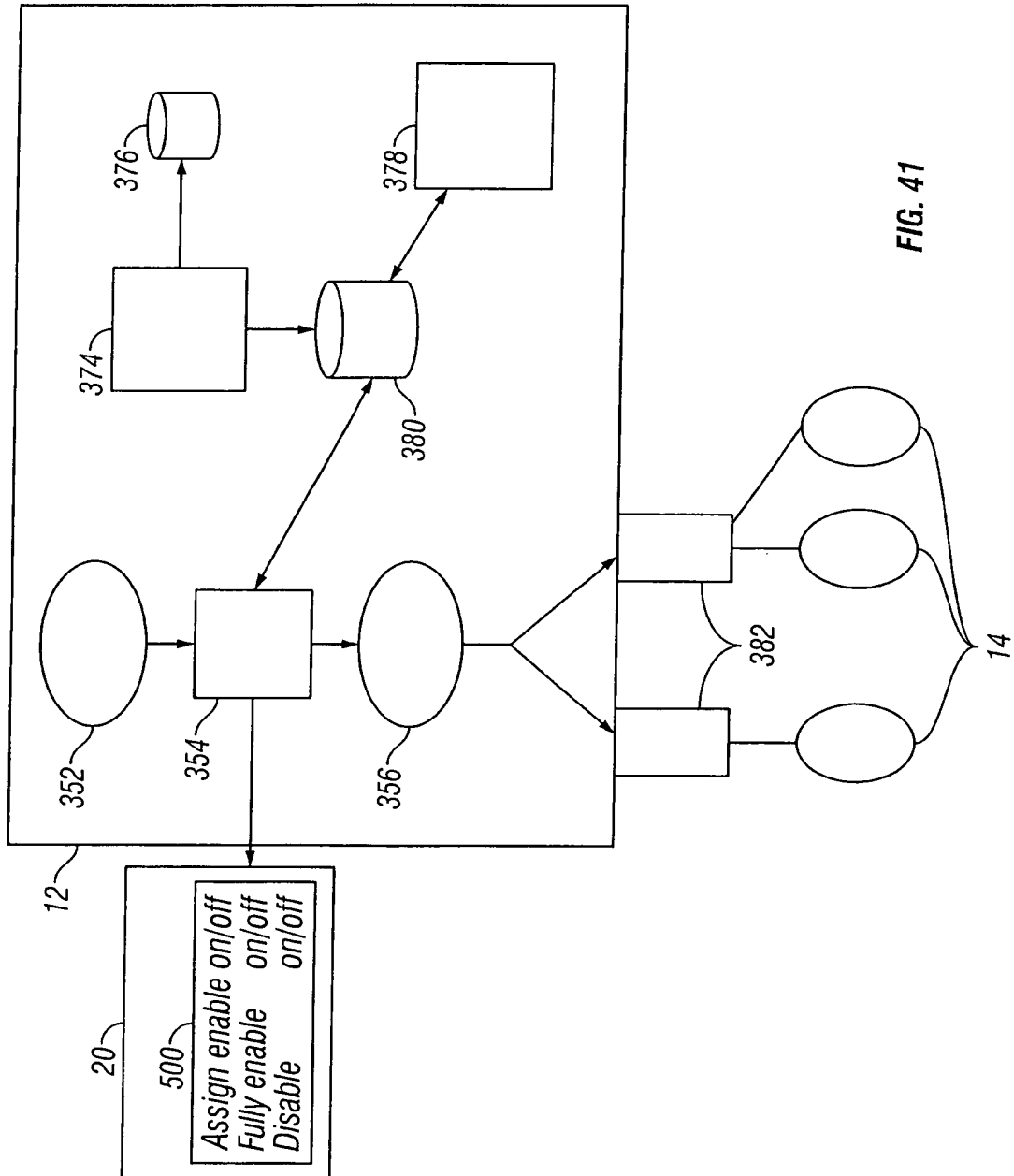


FIG. 40

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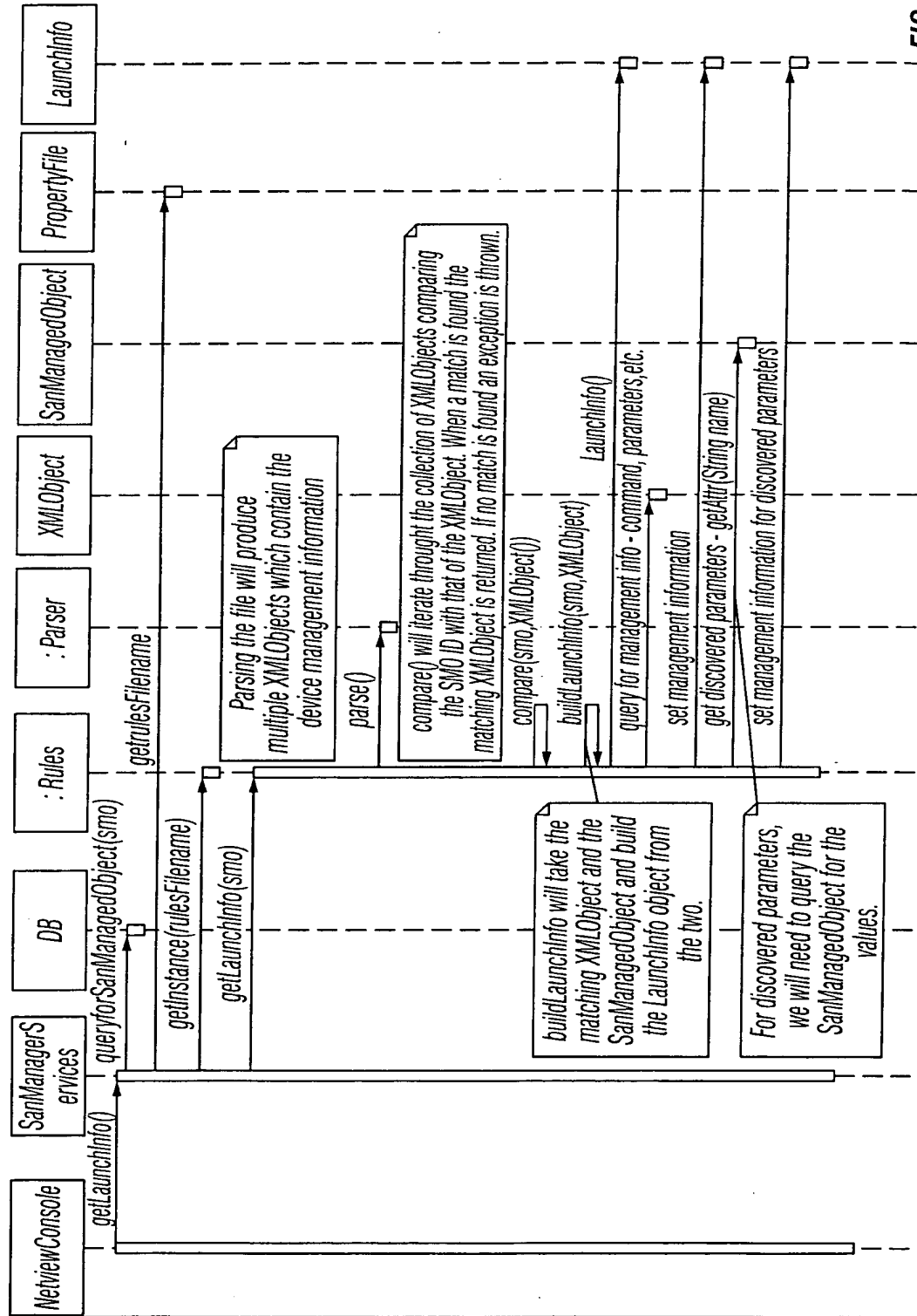


FIG. 42

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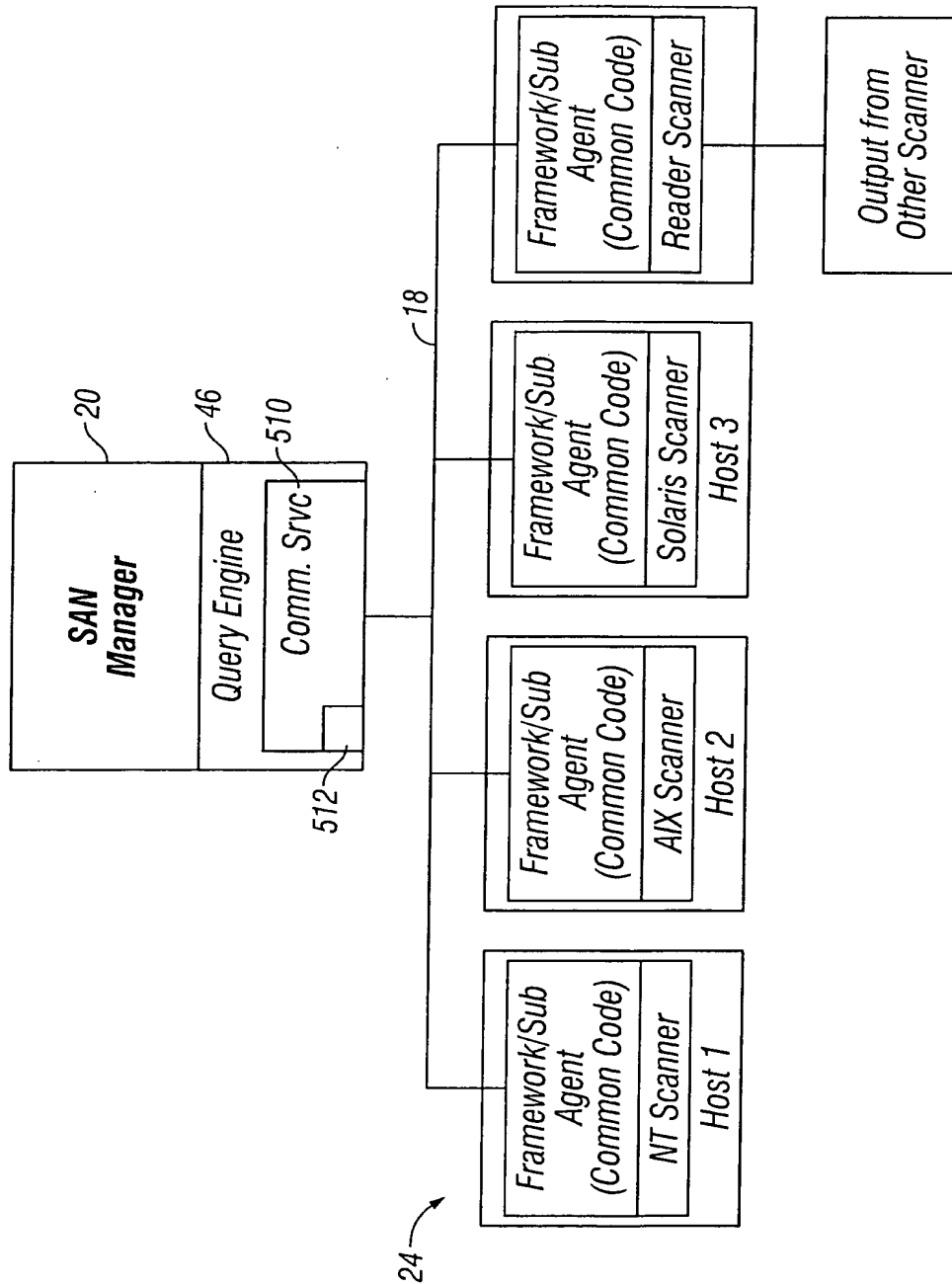


FIG. 43